REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

1. REPORT DATE *(DD-MM-YYYY)*	**2. REPORT TYPE**	**3. DATES COVERED** *(From - To)*
xx-06-2005	Master's Thesis	20-08-2004 to 26-05-2005

4. TITLE AND SUBTITLE

Personnel Recovery and the DOTMLPF Changes Needed for the Twenty-First Century

5a. CONTRACT NUMBER

5b. GRANT NUMBER

5c. PROGRAM ELEMENT NUMBER

6. AUTHOR(S)
Thomas R. Dorl, Maj, USAF

5d. PROJECT NUMBER

5e. TASK NUMBER

5f. WORK UNIT NUMBER

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)

Joint Forces Staff College
Joint Advanced Warfighting School
7800 Hampton Blvd.
Norfolk, VA 23511-1702

8. PERFORMING ORGANIZATION REPORT NUMBER
JFSC 25789

9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)

10. SPONSOR/MONITOR'S ACRONYM(S)

11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION / AVAILABILITY STATEMENT
Approved for public release, distribution is unlimited.

13. SUPPLEMENTARY NOTES

14. ABSTRACT

15. SUBJECT TERMS

16. SECURITY CLASSIFICATION OF:			**17. LIMITATION OF ABSTRACT**	**18. NUMBER OF PAGES**	**19a. NAME OF RESPONSIBLE PERSON**
a. REPORT	**b. ABSTRACT**	**c. THIS PAGE**	Unclassified Unlimited	81	JoAnne Hooper
UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED			**19b. TELEPHONE NUMBER** *(include area code)* 757-463-6301

JOINT FORCES STAFF COLLEGE
JOINT ADVANCED WARFIGHTING SCHOOL

PERSONNEL RECOVERY AND THE DOTMLPF CHANGES NEEDED FOR THE TWENTY-FIRST CENTURY

by

Thomas R. Dorl

Major, United States Air Force

A paper submitted to the Faculty of the Joint Advanced Warfighting School in partial satisfaction of the requirements of a Master of Science Degree in Joint Campaign Planning and Strategy.

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Joint Forces Staff College or the Department of Defense.

Signature: _____

13 May 2005

Abstract

Perhaps the noblest mission in the nation is the one where tremendous risk is taken to rescue personnel who are isolated from friendly control. Personnel recovery, conducted by every service, involves locating and recovering isolated personnel and returning them to safety. This mission continues to grow in scope and coverage as the global war on terrorism widens the battlespace and more U.S. Government personnel and contractors are placed in harm's way. Therefore, this mission must be transformed to keep pace with the new landscape of conflict.

This paper briefly reviews the history of personnel recovery, highlighting areas of concern that have impacted combat operations in the past. A historical perspective is necessary to understand the current posture of today's personnel recovery forces. This historical review is followed by an ample analysis of current service capabilities, required to grasp the issues that shape the personnel recovery mission of today. An in-depth and comprehensive assessment of the existing landscape of landscape is provided to frame the issues for the future of this mission.

Seven key areas are addressed to frame the elements needed to help improve the personnel recovery mission. The seven areas are the doctrine, organization, training, material, leadership, personnel and facilities (DOTMLPF) elements of personnel recovery. The DOTMLPF elements are examined in their current state and problems identified. Realistic and sensible solutions are offered to ensure the Joint Force Commander and the Combatant Commanders have a fully robust personnel recovery force for the twenty-first century.

CONTENTS

ILLUSTRATIONS

Figure

INTRODUCTION

Ever since the beginning of conflict, there has been an emotional and a moral calling to save a fellow warrior from capture, exploitation, and even death. Tales of heroic rescues have been told as long as wars have been waged. American Soldiers, Sailors, Airmen and Marines have performed many acts of heroism to save their fellow warriors in combat from being captured by the enemy. This mission of saving a fellow service member today is known in modern parlance as personnel recovery (PR). Just in the last two decades, this nation along with a coalition of other countries has fought in Operations Desert Shield/Storm, Operation Allied Force, and Operations Enduring and Iraqi Freedom. These four major combat operations have a common consequence to them: military personnel and other government personnel have been shot down, captured, held hostage and even killed or exploited by the enemy. When PR missions and operations occur, U.S. forces go to extreme lengths with great risk and cost of other lives, to save a fellow man or woman.

As long as there are wars to fight, personnel have become isolated from friendly control. This ranges from aircraft being shot down to vehicles being immobilized to personnel simply taken from their living quarters. Some were rescued before being captured and some became prisoners of war. Almost all were exploited for propaganda purposes by their captors. Because our nation values every life and has a credo to recover all killed, missing or wounded in action, this PR mission has received varying degrees of priority over the last several decades from military leaders and statesmen alike. Some of this is good, some bad, but all of it is needed to preserve and protect this moral obligation the nation has to return Americans back to the nation's soil. When American warriors are put into combat situations, the nation has a clear calling and commitment to conduct the PR mission for all of its personnel put into harm's way.

Today, the Department of Defense (DOD) and various interagency (I/A) partners find themselves at a crossroads within the PR mission area. In past conflicts, the nation has recovered the warriors put into danger by a combination of skill, luck, talent and gutsy determination. All services and United States Special Operations Command (US SOCOM) can accomplish the PR mission, but sometimes these operations exist in a separate, stove-piped and independent elements relying occasionally on service-centric capabilities instead of a joint team to conduct the mission. Inefficiencies of capabilities in the mission area, lack of interoperable doctrine, training and equipment and a lack of unity of effort across the PR mission area are problematic and require attention so more personnel can be better trained, educated and better prepared for combat.

Recently, the Director of the Joint Staff, Lieutenant General Norton Schwartz, confirmed this critical need at the DOD Worldwide PR Conference by stating that,

> The Personnel Recovery community is in an interesting position. The job is getting done. But, we are using a conglomeration of ad hoc and dedicated forces that, while highly skilled and capable in their own right, approach the job in different ways. As a result, our efficiency and interoperability, and our success are as much a result of people on the ground "making it happen" as it is a result of prior planning. (Schwartz, 2004, 2)

This eloquently frames the current state of the mission and outlines some the challenges ahead for the PR community across the services and the I/A. Lieutenant General Schwartz also presents a challenge to these community partners in stating that, "Transformation of personnel recovery is essential…it cannot be a gradual evolution, it must be dynamic. PR needs to transform because warfare as we know it is transforming." (Ibid, 2) These comments leave the PR community with the task of enhancing the PR mission synergies, developing and agreeing upon a common vision and developing a way ahead to achieve these results.

Personnel recovery must evolve and transform, creating a more cohesive and coherent PR teams to report, locate, support, recover and reintegrate personnel that are put into harm's way in the name of the United States. In order to address these challenges and to provide better trained, prepared and ready forces to the Joint Force Commander (JFC), the personnel recovery forces across the services must transform. This transformation must occur in totality across the landscape of doctrine, organizations, training, material, leadership, personnel and facilities (DOTMLPF) to effectively and efficiently meet current and future challenges the nation faces.

The aim and methodology of this paper is to present a short history of PR operations across wars and conflicts in the last 90 years, highlighting some shortfalls in the DOTMLPF in order to understand why the PR community is faced with its current problems. Next, a concise review of the service PR forces, including doctrine, organization and training, is required to understand the current landscape and the construct of how the PR community is operating today. The final sections will assess in depth each element of the DOTMLPF landscape, identify problems, and present workable and realistic solutions that will make the execution of combat operations and PR an improved, collective joint effort to benefit the Combatant Commanders (COCOMs) and the JFC. This need is particularly critical today in the Global War on Terrorism (GWOT) with its expanding battlespace, which puts more personnel at risk than ever before.

A BRIEF HISTORY OF PERSONNEL RECOVERY

Studying history teaches us many lessons of the past, both ones to apply to today and others to incorporate in planning for tomorrow. To understand the history of PR, it must first be defined in current terms. PR can be defined as:

> The aggregation of military, civil, and political efforts to recover captured, detained, evading, isolated or missing personnel from uncertain or hostile environments and denied areas. Personnel recovery may occur through military action, action by non-

> governmental organizations, other U.S. Government-approved action, and diplomatic initiatives, or through any combination of these options. (DODI 2310.2, 2000, 2)

This definition of PR embodies the mission area and lays the foundation for a clear understanding of the mission and its reach. There are numerous and similar definitions of personnel recovery. However conveyed, it is defined as all actions taken to rescue isolated personnel and return them to duty. For the purposes of this paper, PR consists of, but is not limited to, four submissions: Combat Search and Rescue (CSAR), Search and Rescue (SAR), Tactical Recovery of Aircraft and Personnel (TRAP), and Non-conventional Assisted Recovery (NAR).

Three key time periods will be reviewed for a solid understanding of the historical foundations of PR and to take inventory of the lessons learned and observations from past wars. The first period is the World War II era and the birth of the PR mission. The second period is the adolescent period during the Korean and Vietnam Wars, when the organizational structure used, the tactics, techniques and procedures (TTPs) discovered and the leadership understanding of the mission shaped. This period served as the foundation for the modern era. The third period is the modern era and the maturation of PR operations. This era began with Operation Desert Storm and continues today with Operations Enduring Freedom (OEF) and Iraqi Freedom (OIF).

PR operations in this nation can be traced back to World War I. The first Medal of Honor for a naval aviator was awarded to Ensign Hammann in 1918 after his heroic actions saved his wingman after he was shot down in the Adriatic Sea. (Thompson, 2001, 9) While PR forces used some aircraft in World War I, it was not until World War II that the aviation aspect of PR was truly used, out of both necessity and capability.

As the Germans prepared for war in the 1930s, Hermann Goering and his Luftwaffe were the early pioneers of air-sea rescue. Rescue at sea was more predominant because most land

areas were held by enemy forces, but the sea offered a safe sanctuary for pilots and crews. As early as 1935, an air-sea rescue service, known as the *Seenotdienst,* was developed. After the Blitzkrieg in 1939, and the later occupations of Holland and France, the Luftwaffe made great strides in the rescue mission. (Tilford, 1977, 3) The Germans outfitted floatplanes, performed rescues at sea, established infrastructure, created new rescue equipment and developed tactics, some of which are still used today. Simply put, the *Seenotdienst* was organized and equipped rescue operations.

The British forces lagged behind in organization and equipment for aviation PR missions. During the early stages of the war, the U.K. relied on an ad hoc conglomeration of Royal Air Force (RAF) boats and aircraft from the unit that suffered the loss to search for the missing crew. This created command and control (C2) problems with rescue operations as just tracking where the lost aircraft and crew was a challenging task. This problem was slowly solved with reorganization and revision of RAF air-sea rescue forces.

As the Battle of Britain continued into 1940, the RAF suffered heavy losses; over 200 airmen were "killed or went missing in the seas around England." (http://www.raf.mod.uk/history, 2004, 1) This prompted the development of a U.K. joint task force with RAF and Navy forces combining efforts to create a "rescue organization, [where] the RAF responsible for organizing and performing aerial searches and the Navy for making the actual recoveries." (Tilford, 1992, 50) In 1941, the RAF created its own Air/Sea Rescue Service (ASR).

Similarly, U.S. forces were initially poorly organized and trained for air-sea rescue operations. The Army Air Corps performed the land rescues, while Navy or U.S. Coast Guard (USCG) assets handled water recoveries. Additionally, each service was responsible for training

its own personnel in survival practices and giving them the proper survival equipment. Eventually, effective leadership solved this and introduced some organization changes that created efficiencies and effectiveness in the mission.

After the U.S. entered the war in late 1941, General Hap Arnold helped create a coalition rescue effort. In the Atlantic, the U.S. and British forces trained, learned and operated together in rescue operations. This helped with organizational control by refining some of the tactics and procedures the Allies used to save aircrewmen. In particular, advancements in water rescue operations occurred since most of the flying in WW II was over open water. As an example, SB-17s dropped boats to downed aircrew and submarines were used for rescues. By 1942, ASR coverage had expanded, providing search and rescue coverage to virtually all of the U.S. and RAF crews participating in the war. (Ibid, 7)

Operations in the Pacific increased as well. Getting to the isolated personnel (IP) was difficult with vast amounts of water in the area and treacherous mountain and jungle terrain. Fixed wing aircraft did perform some rescue missions over water, while vehicles performed some missions over land, but the first major improvement in equipment that bolstered the personnel recovery mission was the introduction of helicopters. These helicopters, although introduced in the later stages of the war, partially replaced fixed wing aircraft because of their flexibility and almost fully replaced vehicles simply because the helicopters were faster than the military trucks and other vehicles. Speed and the flexibility of a recovery platform were critical characteristics that helped save many wounded personnel in combat. The first Army Air Forces helicopter rescue occurred on April 25, 1944 in Burma after a plane crashed with wounded British soldiers on board. (http://www.wpafb.af.mil/museum/history/rescue/res4.htm, 2004, 1)

In May 1945, the 8th Emergency Rescue Squadron was established in China specifically for air-rescue missions. This organizational change of a dedicated rescue force had early successes: 43 lives saved in 110 missions within the first 6 months, in locations where "…ground parties would have taken weeks to get to the survivors." (Tilford, 1992, 7) During the war, nearly 5,000 U.S. personnel were saved with this expanding rescue mission. (Ibid, 8)

After the end of World War II, the services argued who was best suited to own the mission. Most of the missions occurred over the water, hence the Navy claimed it was their responsibility, yet the Army Air Forces believed it was theirs because of a larger role in global power and ability to reach the survivor with aviation assets. A feasible solution was developed in 1945, as Assistant Chief of the Air Staff for Operations, Commitments and Requirements, General Hoyt Vandenberg, sought to align the rescue mission area under the Air Transport Command, responsible for covering air rescue over land and the command's over water routes. Vandenberg advocated reorganizing some Army commands and creating agreements with the USCG, covering the littoral regions of the nation. In 1946, the Air Rescue Service (ARS) was created, helping to create an organizational base for the rescue mission. (Ibid, 8)

Though the ARS was established, budget cuts resulting from a lack of necessity for PR forces left the majority of these assets on the shelf until needed in the Korean Conflict. The leadership of the services could not see the need for a peacetime rescue force that trained for combat operations. Within a month of the Korean War beginning, rescue forces were permanently based in Taegu, Korea. The helicopters of the USAF 3rd Air Rescue Squadron proved valuable, moving with the battle, available for commanders to use and conducting frontline rescues. (Ibid, 12) The capability of rotary-wing aircraft and the importance of the PR mission quickly caught on. Army planners and commanders used the utility of the helicopter for

combat rescues when General Matthew Ridgway, Commander of UN Forces, asked for four U.S. Army helicopter battalions for front line evacuations. Ridgway eventually got them and from 1951 to the end of the war in 1953, these Army helicopter units made over 19,000 saves from the battlefield. (Ibid, 12)

Organizational changes also occurred in the Korean War. The development of a rescue coordination center (RCC) used effective C2 during rescue operations and the development of the joint interoperability of these rescue forces were two of the most notable improvements in the mission. Additional changes and improvements included Navy fighters escorting Air Force helicopters to and from the survivor's area. This CSAR Task Force (CSARTF) provided the commanders a viable and joint rescue team. By the end of the war, the newly formed ARS had carried 9,898 United Nations personnel to safety. (Westermann, 1990, 1) Having proven their worth in Korea, rescue forces swelled to 50 ARS units and 7,900 personnel recovery personnel across the world after the war. (Tilford, 1992, 15)

In 1958, the ARS again faced inevitable reorganization. The blending of the peacetime and wartime search and rescue operations became a transparent reality. The assembly of different missions occurred with a statement announcing the new role and mission of the ARS:

> ARS will be organized, manned, equipped, trained, and deployed to support peacetime air operations. No special units or specially designated aircraft will be provided for the sole purpose of wartime search and rescue. Wartime rescue operations will be dictated by the capabilities of equipment used for peacetime search and rescue (SAR) and will be conducted in accordance with JANAF [Joint Army, Navy, Air Force] and Standard Wartime SAR procedures (Ibid, 16)

With this announcement, the largest PR force in the DOD was effectively neutered of combat capability. Thus began the mentality of shelving rescue units when not needed, which created problems for future wars. By 1961, this capable force dwindled to less than 2,000 personnel in just eleven units, with little focus on a combat mission. (Ibid, 15) This era created

service wide hollow rescue forces with lackluster capabilities, few people performing the mission and a thin budget from which to operate.

By the time the U.S. immersed itself into Vietnam, the USAF rescue forces and ARS had almost fully eroded in capability. The services had aviation assets (helicopters) but none dedicated to rescue operations and "…had agreed to make their helicopters available [only] whenever they were not need elsewhere." (Ibid, 39) Poor decisions made during peacetime created a mindset that PR was an afterthought for combat operations. This idea was rife in the DOD and lead to a slow placement of SAR forces into the Vietnam War.

The first shoot down of a military aircraft in the Vietnam War was in 1961. A special reconnaissance C-47 was shot down and the pilot was captured, spent time as a prisoner of war and later released. (Ibid, 33) The lack of rescue forces in the region was directly tied to the peacetime focus of the ARS. Each of the services was responsible for rescuing its own personnel and each lacked capable rescue forces. Pacific Air Forces (PACAF) gave this mission to the 13th Air Force for USAF personnel and the Navy had the Commander, Naval Forces Philippines, focus on naval rescues. (Ibid, 33) The Central Intelligence Agency (CIA) also performed missions in the region, using organic forces to recover their own crews during Operation Farmgate. (http://www.milnet.com/afsoc.htm, 2005, 1)

While each service was tasked with conducting their own rescues, organizational challenges were widespread. From a planning perspective, ARS leadership "…was not convinced that it had a legitimate wartime rescue mission and…had not planned for a wartime situation." (Tilford, 1992, 37) This thought process bled over to equipment issues that created problems. For example, it was discovered that Navy emergency beacons operated on different frequencies than Air Force ones and the USMC believed rescue

operations simply consisted of lowering a cable which the survivor would jump on to be saved. (Ibid, 49) Since there was no oversight mechanism for material items and education and training for the PR mission in existence, the services equipped how they saw fit.

Many material items, organizational changes and TTPs were developed and refined in Vietnam. A new CH-3 Jolly Green helicopter with improved weapons was developed and helicopter air refueling was pioneered to extend ranges of helicopters. Additionally, the development and use of a jungle penetrator device, used to lower USAF pararescuemen (PJs) and Special Operations Forces (SOF) for rescue operations, provided operational improvement to the mission area. Organizational changes included a new Joint Search and Rescue Center (JSRC) in the area of responsibility (Vietnam, Cambodia, Laos, Thailand), along with two separate RCCs at Da Nang and Udorn. (Ibid, 73)

As the war increased in scale, review of the PR mission was needed. In 1963, Major Alan Saunders, USAF, completed a rescue requirements study for all U.S. forces in Vietnam. He quickly reported that Army, USMC and South Vietnamese commanders would release helicopters for rescue missions only when they were not required elsewhere or were currently not supporting the ground forces. Saunders advocated establishing formal training for all forces and recommended that USAF rescue forces be committed to Vietnam. This study served a great purpose and was ultimately embraced by the Commander of PACAF. By early 1964, the USAF began to plan for rescue units into Vietnam. However, the report was shunned by the senior Army leaders because of service pararocialism and disagreement over the role and mission for a helicopter. The Army and USMC did agree to use their helicopters in rescue roles when not needed for other operations and troop movements. (Ibid, 45)

Personnel recovery was growing into an adolescent stage during Vietnam. The mission truly became joint in 1965 when the Navy sent one officer to work as a liaison in the JSRC. The result of this newly formed joint relationship was coordination and communication. Rescue forces were placed near areas where Navy, Marine and Air Force strike packages were to attack. This improved response times, tactics, techniques and procedures (TTPs), communication and working together simply by personnel discussing and understanding what missions their respective service was conducting at the time and projecting where the rescue forces were needed. Within a few years, PR missions came a long way, working toward jointness and creating an interoperable force capable of personnel recovery virtually anywhere. (Ibid, 73)

Because of these changes, by 1966 the chances of a successful rescue improved to a one in three chance of rescue if crews were shot down. (Ibid, 77) The commander's mindset changed as they saw the benefit of dedicated PR forces. One commander noted that he "…would call upon every military resource available…Air America, special ground teams…frogmen, aircraft carriers and tanks. There is not limitation on tactics or concepts to be employed to affect a rescue." (Ibid, 96)

With the end of the Vietnam War, the JSRC closed in December 1975 having assisted and coordinated many rescues across the services. All of the efforts and advancements in the PR mission during Vietnam helped recover more than two thirds of the 4120 isolated personnel. (Kennedy, 2001, 1) ARS was renamed the Aerospace Rescue and Recovery Service (ARRS) and the PR assets across the services saw cutbacks. ARRS units were drastically reduced, while the Navy transferred their rescue forces to reserve components and continued conducting over water rescue missions. The Army learned the helicopter was a great troop transport, yet keeping

dedicated PR and CSAR assets was not important for their missions. The USMC also determined the mission could be translated into their service version of PR which "…was arguably the genesis of what we know today as (tactical recovery of aircraft and personnel) TRAP." (Fortunato, 2002, 21) Once again, the mission of personnel recovery was put on the back burner.

The modern era of PR began in earnest during Operation Eagle Claw with the mission in April 1980 to rescue American hostages in Tehran, Iran. Operation Eagle Claw failed at many levels, and highlighted the need to fuse the joint fight in many missions, especially PR. Colonel Beckwith, Delta Force commander at the Desert One site in Iran "…attributed the failure to…the use of an ad hoc organization for such a difficult mission…all the parts all performed, but they didn't necessarily perform as a team." (Kreisher, 1999, 1) At the cost of U.S. lives and national embarrassment, Eagle Claw revealed the need for the services to work together in doctrine, training, organization and technology. Colonel David Hackworth summarized the fall out after the rescue mission stating, "The after-action reports were unsparingly in their criticism of everything from poor training and planning to leadership by committee and interservice rivalry." (Hackworth, no date, 1) Operation Eagle Claw proved that PR was a vital mission and deserved appropriate attention, yet it would be some time before changes were made.

Operation Desert Storm in 1991 consisted of a vast coalition and joint forces working together, putting many TTPs, capabilities and doctrine to the test in combat operations. Desert Storm also put many personnel at risk within a broad and deep battlespace. Each service had some CSAR capability, but most of the CSAR forces in the war were provided by the USAF Special Operations Forces (SOF) units, and not the conventional rescue forces of the USAF.

At this time, USAF conventional rescue forces were in the state of preparation, not readiness. The ARRS was in the process of establishing combat rescue squadrons in the beginning of 1990, yet they were not organized, trained or equipped to conduct the mission in the war. Eight MH-60G, 13 MH-53J and HH-3 helicopters and C-130 refueling assets provided CSAR for the USAF, while the Army's 160th Special Operations Aviation Regiment (SOAR Airborne) used MH-47s and MH-60Ls as CSAR assets, thereby diverting SOF platforms away from key SOF missions. The Navy had only two HH-60Hs on a 24-hour alert for missions in the Persian Gulf and Red Sea areas per each carrier battle group. (Thompson, 2001, 27)

Despite these assets, it was revealed after Operation Desert Storm that,

> By the time the war was over, the USAF Central Command (USCENTAF) JRCC had tracked 56 combat incidents, launched 13 rescue missions in efforts to rescue 77 personnel, and ultimately recovered three individuals. Combined with a recovery by US Army ground forces of a two person AH-64 crew, the total aircrew recovered under combat conditions during Desert Storm is five. (Dipaolo, 2001, 2-63)

Special Operations Forces performed the majority of the PR missions in Desert Storm because of their advancements in training, equipment and readiness that partly resulted from Operation Eagle Claw. This created some operational and doctrinal challenges. The PR mission was not primary for the SOF units, but their capability (training, equipment and readiness) provided the best forces for the mission and the best option for the JFC. A Gulf War Study stated "…none of the services possessed forces trained or equipped solely to conduct classic combat search and rescue missions." (Ibid, 2-74) The important lessons emerging from Desert Storm were that PR missions are joint in nature and must be planned accordingly. Communication and coordination are of the highest importance while the education, training and preparation for survival, evasion, resistance and escape (SERE) of all personnel cannot be overlooked.

Four years later, during Operation Deny Flight in 1995, two PR events occurred that captured headlines around the world. Capt Scott O'Grady, piloting an F-16, was shot down by a surface-to-air missile on 2 June 1995 and spent six days evading. Reports varied widely about his status, as there was little voice contact with him. CSAR forces were divided between the USAF Air Force Special Operations Command (AFSOC) MH-53Js helicopters and MC-130Ps and the USMC 24th Marine Expeditionary Unit Special Operations Capable (MEU-SOC) aboard the *USS Kearsarge* in the Adriatic Sea. Eventually, after over 500 missions searched tirelessly for O'Grady, voice contact was made and the TRAP package from the 24th MEU launched and rescued him on June 8, 1995. (DiPaolo, 2001, 2-86)

The second CSAR mission in Deny Flight was for the French crewmembers of Ebro 33, a Mirage 2000K that was shot down on 30 August 1995. Three separate rescue attempts were made over one month, however communication was never established. Each mission was approved and authorized by General Joulwan, Supreme Allied Commander Europe, because he believed had enough intelligence, in this case an aerial photograph of what looked like a symbol from a survivor, which was reportedly staged by the enemy. (Whitcomb, 2002, 37) With improved education and training of senior leaders in the mission, the situation and outcome may have been different. By experiencing PR scenarios in exercises or a training environment, senior leaders could possibly be better equipped for critical decisions. The lesson learned from this mission was that without location or survivor communications "…the missions flown for Ebro 33, were futile." (Ibid, 38) This need for a coherent communications net and capability is a material problem that requires a solution.

PR forces were called to action and many responded as Operation Allied Force (OAF) began. Lessons from Desert Storm were applied to OAF by developing a "PR Coordination Cell

(PRCC) [that] established a 'PR umbrella' over the entire Theater, consisting of PR forces and assets provided by all Services of the U.S., the United Nations, and several Allied Nations within NATO." (DiPaolo, 2001, 2-98) This PRCC oversaw the PR missions for the JFC and was instrumental in coordinating for two major CSAR events.

The USMC used its TRAP capability aboard the *USS Kearsarge* Amphibious Ready Group (ARG) with the 24th MEU (SOC), while the Navy used forces and helicopters from the *USS Theodore Roosevelt* Battle Group. The USAF was not able to use its dedicated CSAR forces (HH-60Gs, HC-130Ps and PJs) until later on into the war because they were participating in Operations Northern Watch (ONW) and Southern Watch (OSW). Instead, the USAF turned to the AFSOC units flying MH-60Gs, MH-53Js and the MC-130P for Air Force CSAR.

The two PR events that gained the most media attention were the shoot downs and rescues of an F-117 pilot, call sign Vega 31, and an F-16 pilot, call sign Hammer 34. (http://www.f-117a.com/Vega31/Vega31-2.html, 2005, 1) Vega 31 was shot down on March 27, 1999 by a surface-to-air missile (SAM) while on a bombing mission near Belgrade. The rescue mission took many hours to complete, with a large CSARTF consisting of A-10s, F-16s, KC-135s, C2 and many other aircraft and SOF teams participating in the rescue. Hammer 34 was also downed by a surface-to-air missile. A flight of AFSOC helicopters rescued the pilot within hours of the shoot down and returned him to friendly control.

Both the Hammer and Vega missions highlighted some areas of concern. First, using SOF aircraft for CSAR took some of these assets away from being able to support SOF missions, similar to what happened in Desert Storm. (http://www.defenselink.mil/specials/kosovo/index.html, 2005, 1) Second, when AFSOC forces were tasked to perform the CSAR mission, integration problems occurred as the AFSOC teams

answered to two masters, both the JSOTF and the JFACC Third, when they finally got the war, the Air Combat Command (ACC) aircraft did not have the required defensive systems on board to defeat the robust threats. Operational control (OPCON) was retained by the JSOTF, however when the CSAR forces launched on a mission, tactical control (TACON) was transferred to the Joint Force Air Component Commander (JFACC). (Trumpfheller, 2005) This C2 relationship blurred lines of command and fashioned disputes over use of forces that were resolved slowly.

Personnel Recovery operations continue today in the ongoing combat operations in OEF and OIF. Recovery of Americans has the highest levels of attention and concern as demonstrated when Defense Secretary Rumsfeld announced, “If we have no CSAR in the north, you can’t have air operations in the north.” (Woodward, 2002, 164) The senior civilian leaders understood the importance of PR from past wars and respected the impact that captured Americans paraded across the television could have on the political objectives of the war.

The beginnings of OEF saw a robust PR order of battle. AFSOC forces again provided initial CSAR coverage. Later, USAF forces under ACC deployed in the early stages of the war, providing USAF coverage for joint and coalition assets flying the HH-60Gs, HC-130Ps and PJs from many different squadrons. USN CSAR forces were from the *USS Enterprise* and *USS Carl Vinson* Strike Groups using mainly HH-60H helicopters for CSAR and PR operations. The USMC forces consisted of the 15th and 26th MEUs afloat on the *USS Bonhomme-Richard* Expeditionary Strike Group (ESG) and later on from land bases in Afghanistan. U.S. Army forces were centered around the 101st Airborne Division and the aviation assets associated with the units.

(http://www.globalsecurity.org/military/ops/enduring-freedom_orbat-02.htm, 2005, 1)

Lieutenant General Norton Schwartz noted in remarks at a 2004 DOD PR Conference that the PR mission achieved historic results in OIF stating:

> This was the first time we had 100% accountability of personnel at the end of major combat operations. However, what you may not know is that we also deployed the largest dedicated PR force since the Vietnam War. This force architecture consisted of a JSRC with 27 command and control nodes. This recovery mechanism is credited with 55 personnel recovery missions, saving 78 personnel and rescuing eight POWs, the first liberation since World War II. (Schwartz, 2004, 1)

This achievement should serve as a historical reference. The leaders in the PR community and within the services must not allow the PR forces to become complacent or satisfied with this result. It is unclear how long OEF and OIF will continue, but there are some certainties to the new GWOT. The battlespace of the GWOT is expanding, which puts more people (both DOD and other US government personnel) at risk of capture. This mission of PR is expanding into unknown realms of capability, intelligence and the contributions that interagency partners can make. It is time again to assess the changes that are needed across the DOTMLPF landscape, thereby assuring the JFC a better trained, organized and equipped PR force.

SERVICE PERSONNEL RECOVERY CAPABILITIES

According to Joint Publication *(JP) 3-50.*2 *Joint Doctrine for Combat Search and Rescue*,

> Each service and US Special Operations Command (US SOCOM) are responsible for performing combat search and rescue (CSAR) in support of their own operations. JFCs normally delegate responsibility to recover personnel to the joint force component commanders. (JP 3-50.2, 1996, vii)

Each service and US SOCOM are responsible for its own personnel in combat operations and are expected to train, organize, and equip forces adequately enough for the mission. This section will review the basic doctrine, organization, equipment and command and control each service's PR forces, providing a understanding of the current landscape of DOD PR capabilities.

The USAF is the only service in the DOD with dedicated organizations of wings, groups and squadrons for PR missions as well as the operational control structures for effective C2 such as the Air Operations Center (AOC), Airborne Warning and Control System (AWACS) aircraft and the Air Force Rescue Coordination Center (AFRCC). The Air Force PR forces conduct CSAR missions with dedicated Air Force CSAR forces including the HH-60G, HC-130 and PJs. Other support assets include A-10s, F-16s, and C2 platforms contributing to the mission. These assets participate in the Air Expeditionary Forces (AEF) rotations and provide the JFACC with a robust rescue team for the JFC.

The USAF has Major Commands (MAJCOMs) that "…are responsible for organizing, training, equipping, sustaining and providing operationally ready forces for CSAR operations." (JP 3-50.2, 1996, D-2) MAJCOMs, including PACAF, USAF in Europe (USAFE) and AFSOC have dedicated and CSAR capable forces assigned and provide the Combatant Commanders (COCOMs) with rapidly deployable forces.

PR is a total force mission for the USAF. AF Reserve (AFRES) and Air National Guard (ANG) rescue units from around the country deploy and participate in combat operations. While each unit has specific other requirements, each AFRES and ANG unit contributes to the combat mission. AFRES units in Florida, Arizona and ANG units from Alaska, New York and California also provide combat ready forces during OEF and OIF. Today there are ten HH-60G squadrons, five HC-130 squadrons and four PJ squadrons providing dedicated PR forces for the USAF across the active duty, AFRES and ANG. In addition, the USAF via the AFSOC AFRCC "…is responsible for inland peacetime search and rescue in the contiguous states via the Air Force Rescue Coordination Center (AFRCC)." (AF fact sheet AFRCC, 2005, 1)

Command and control of the USAF rescue forces is conducted by the JFACC through the Combined Air Operations Center (CAOC). The JFACC will usually have Operational Control (OPCON) of these forces and relinquish tactical control (TACON) when these AF forces are used in a joint CSAR operation. In recent combat operations, the JFACC was also the lead component for the coordination of joint PR missions.

PR operations in the Navy operate under the missions of CSAR and Naval Special Warfare (NSW). Navy CSAR TTPs, doctrine, equipment and organization closely parallel the USAF, yet the Navy's C2 of CSAR is slightly different and mainly focuses on water rescue and some over-land rescue operations. Navy PR forces traditionally operate as part of the Carrier Strike Group (CSG). Each CSG is tailored to meet the needs of the commander providing flexibility and capability required to conduct naval operations while supporting the JFC's intent. A CSG is usually built around a carrier, missile cruiser, two destroyers, a supply ship and a submarine. Aboard the carrier is a carrier air wing (CVW), containing F-18s, EA-6Bs, E-2Cs and a variety of H-60 helicopters, all of the organic forces needed for component level rescue mission. The CVW commander usually has three HH-60H CSAR helicopters in the helicopter squadron, but can tailor the unit to meet the demand of combat operations. (Potts, 2005)

The Navy organizes the CSAR team under the C2 of the Officer in Tactical Command (OTC), who is normally the CSG commander. This OTC designs and builds a Rescue Coordination Team (RCT), serving as focal point for planning, and coordinating PR missions for the Naval component who "…is the nucleus responsible to the commander for conduct and execution of all CSAR operations." (JP 3-50.2, 1996, B-3) Working with the RCT, the CVW assists in all planning and execution of CSAR missions. The RCT contains abilities to conduct operations at sea or over land. If amphibious operations are conducted, the Commander of the

Expeditionary Strike Group (ESG) may employ organic CSAR forces and work with the commander of the landing force for specific missions. (Ibid, B-4)

The Navy has over 25 helicopter squadrons, all capable of performing some level of PR operations. (Little, 2004, slide 47) However, it only has two fully dedicated to the CSAR mission. Helicopter Combat Support Special Squadrons Four located in Norfolk, VA and Five in San Diego, CA are "both Naval Reserve units…solely dedicated to Naval Special Operations and CSAR." (Cantrell, 2003, 2) These units maintain forces on 72-hour alert, and "…train regularly with Navy, Army and Air Force assets to hone their skills while working with entire task forces to bring our people home." (Ibid, 4)

The USMC is the most expeditionary service, organized both functionally and geographically. The USMC employs combat ground and air power via a Marine Air Ground Task Force (MAGTF) to conduct its concept for CSAR, known as TRAP. This force is a highly skilled combat force, organically possessing required assets for PR operations. MAGTFs for PR are usually conducted via the Marine Expeditionary Unit (MEU). These MAGTFs provide unique flexibility and capability to the regional COCOM and JFC.

MEUs are self-contained forces, with a command element, ground combat element, air combat element and combat service support element commanded by a colonel, with over 2,000 Marines and Sailors embarked as a notional three ship ESG. This MEU (SOC) is one of the most rapidly deployable combat ready force. (http://www.usmc.mil/meus/24thmeu.nsf/pages/mission.htm, 2005, 1) Through aggressive training, MEUs (Special Operations Capable) also obtain the TRAP certification and "…satisfy the requirement for each service to be able to perform CSAR." (Fortunato, 2002, 9) The TRAP

team's "…ultimate goal is to affect the expeditious return of equipment, personnel and/or aircraft without further loss of friendly forces." (JP 3-50.2, 1996, C-3)

Supporting the TRAP mission is the employment of a mix of aircraft, including CH-53s, UH-1Ns and AH-1Ws, and AV-8Bs and a platoon strength ground element. The TRAP team uses detailed mission planning and key intelligence about location and life of the survivor as it cornerstones of operations. (JP 3-50.2, 1996, C-2) A key distinction of the TRAP mission is that they "…have no inherent search capability…and TRAP principles closely parallel those of a raid." (Fortunato, 2002, 10) Additionally, "…helicopter crews have skills related to CSAR functions, [but] training is weighted toward assault support functions—not CSAR." (JP 3-50.2, 1996, C-4)

Command and control of the TRAP force are similar to the other services. C2 usually resides with the MAGTF commander, but he closely coordinates with the Joint Force Maritime Component Commander (JFMCC), the component RCC and the JSRC. The MAGTF commander "…should retain OPCON of his assigned forces in order to take advantage of the unique and balanced combined arms capability…and may relinquish TACON of those forces to support the CSAR operations of the supported component commander." (Ibid, C-4)

The US Army is the service going through the most changes in the PR mission area. Recently, the Department of the Army established a PR office, currently developing a viable PR doctrine and training and operating concepts. This organization is coordinating and conducting a sweeping review of Army capabilities, limitations and charting a vision for the Army's future in PR. However, the current CSAR doctrine states:

> The Army does not have dedicated CSAR units of aircraft …CSAR is a secondary mission for Army aviation, medical evacuation (MEDEVAC) units and watercraft units…and because of insufficient quantities of rescue equipment, CSAR missions are

> secondary missions for helicopter units and other Army units tasked by the JFC. (JP 3-50.2, A-1)

Further, the Army is limited in scope and span of control because they are

> …not normally TACON (tactical control) to the Joint Forces Air Component Commander (JFACC) (they are placed on the air tasking order (ATO) for visibility only), which can lead to confusing command relationships when short-notice recovery missions are executed in the joint air operations area. (Nelson, 2004, 12)

Many aviation units have CSAR procedures in a unit's standard operating procedures (SOP), all have exposure to the Special Instructions (SPINS) addressing CSAR procedures and some units have trained with other services for CSAR missions to advance their own service TTPs.

The concept of operations for the Army PR mission is unique, since it has ground and aviation assets on the battlefield. The ground assets can recover Army personnel in combat where aviation assets may not be able fly. Command and control of the PR forces is usually retained within the brigade level for TACON and the Combined Force Land Component Commander (CFLCC) usually would have OPCON but both coordinate with the component RCC for rescue missions. In OIF, the CFLCC had its own RCC and sometimes used a Quick Reaction Force (QRF) employing a Downed Aircraft Recovery Team (DART) or a medical evacuation aircraft for some CSAR missions. Training for PR is spread across the company level to the brigade level and SOP are developed to conduct missions and provide guidance. Unless directly tasked by the division commander, Army forces will not traditionally have dedicated PR forces on alert. (Bassani, 2005)

Special Operations Forces are inherently joint in nature and focus primarily on nine core tasks as their mission area. PR is not a listed core task, but an innate capability they possess. (US SOCOM posture statement, 2004, 28) As such, they are also responsible for recovery of their own personnel in combat. Currently, US SOCOM does not have any dedicated CSAR forces,

yet possesses elements that are capable of PR operations, including Army and USAF helicopters, fixed wing aircraft and Sea, Air and Land (SEAL) teams. Command and control of SOF missions reside with the Joint Forces Special Operations Component Commander (JFSOCC). The JFSOCC "…normally will not have a separate RCC like the Air Force or Navy components, but the functions comparable to an RCC will be resident within the JFSOCC's Joint Operations Center (JOC)." (JP 3-50.*2*, 1996, F-2) The JOC staff works with the JSRC to coordinate PR operations.

Special Operations Forces units usually rely on specific SOF publications and component SOPs while conducting missions, especially while conducting non-conventional assisted recovery (NAR). DOD Instruction 2310.6 defines NAR as

> All forms of personnel recovery conducted by an entity, group of entities, or organizations that are trained and directed to contact, authenticate, support, move, and exfiltrate U.S. military and other designated personnel from enemy-held or hostile areas to friendly control through established infrastructure or procedures. NAR includes unconventional assisted recovery (UAR) (DODI 2310.6, 2000, 2)

The DOD instruction also mentions that UAR is NAR conducted by SOF units. SOF uses NAR "…to recover IPs beyond the capabilities of conventional forces." (Ibid, 3) SOF has the assets and capability to conduct a wide variety of PR missions, including CSAR, NAR and UAR, yet must focus on the SOF core tasks and not be dedicated for PR missions because of their limited numbers. It is important that SOF retain and promote the ability to perform NAR and UAR and operate where conventional forces cannot. Lessons learned from combat operations in Afghanistan and Iraq have and will continue to provide an opportunity for each service and US SOCOM to hone and refine their PR knowledge skills and abilities.

DOCTRINE

Regardless of service, PR forces depend on doctrine. Military doctrine is a basic statement on how the DOD prepares for and executes a vast spectrum of military operations that support our national interests. Personnel recovery doctrine flows naturally from the National Security Strategy (NSS) through DOD and service instructions, to the individual documents used in operations, as outlined in Figure 1. The doctrine of PR is improving, but is still unclear and inconsistent to the JFC. The PR community must shape the future doctrine to better serve the JFC and help improve this mission of national importance.

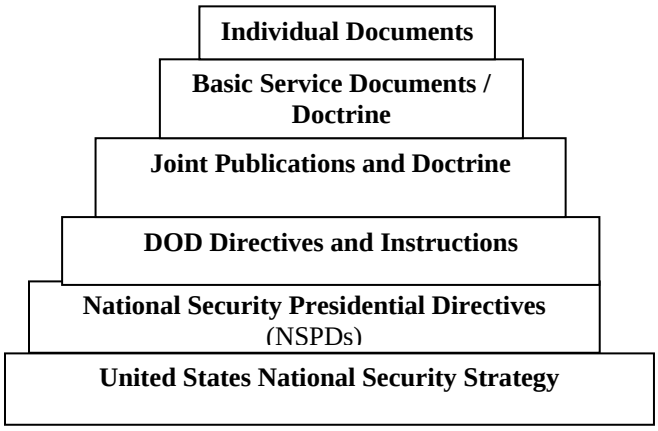

Figure 1. Personnel Recovery Doctrine Family

As quoted by Dr. Milan Vego, Clausewitz stated, “It is only when we have reached agreement on names and concepts that we can hope to progress with clearness and ease and be assured of finding ourselves on the same platform with our readers.” (Vego, 2005, slide 2) This aptly summarizes the challenges of doctrine, policy and documents within the PR community as joint doctrine is revised, service doctrine is developed and refined and new documents produced. To truly transform the PR mission area, the services and the PR community must transform the

full spectrum (strategic, operational, tactical) of doctrine to guide and shape the mission. PR doctrine must also expand to include the I/A partners who support DOD operations. This PR community of services, agencies and personnel that conduct the mission must build an organized repository of information and actionable procedures for the JFC and COCOMs.

As the foundation of PR doctrine, the NSS states key national values and national interests. The NSS defines the missions of the military as being able to "…assure friends and allies, dissuade future military competition, deter threats against U.S interests, allies and friends and decisively defeat any adversary if deterrence fails." (NSS, 2002, 29) These tasks provide strategic and operational level direction to the DOD and serve as a guidepost to the doctrine and documents that guide the PR mission.

Based on the NSS, the President signs National Security Presidential Directives (NSPDs) to serve "…as an instrument for communicating presidential decisions about the national security policies of the United States." (NSPD 1, 2001, 1) A pending NSPD will addresses the recovery of isolated or missing U.S. Government (USG) personnel and contractors while overseas. This revolutionary document is intended to communicate a clear policy on USG personnel put in dangerous situations and frame the efforts for recovery if they become isolated. Additionally, this NSPD helps create linkages, relationships and increase efforts the USG does to recover and return the IP. This cohesiveness must drive itself down to the lowest level of our PR doctrine.

The NSPD, when signed, will help to outline roles and responsibilities of the USG for both the DOD and USG agency PR missions. This NSPD will provide the appropriate national level guidance to USG departments and agencies on communication, integration and operation in concert to recover and return IPs. This national policy decision will facilitate a needed foundational concept for the nation to assist the DOD and many I/A partners. These include, but

are not limited to, the Department of State (DoS), CIA, the Federal Bureau of Investigation, and the Department of Justice. Colonel Mark Bracich, Deputy Commander of the Joint Personnel Recovery Agency (JRPA), Joint Forces Command (JFCOM) office of primary responsibility for PR states, "Benefits gained from the NSPD will span across the DOD and the I/A partners, but will largely benefit I/A partners in the short and mid-term, and the JFC and the combatant commander in the long-term for a variety of reasons." (Bracich, 2005)

The NSPD essentially will serve as a forcing function for the I/A partners to increase the awareness, coordination and planning for personnel recovery. Notionally, the I/A community already plans for protection of personnel abroad, but it now will be able to more easily integrate its plans into DOD theater capabilities. This NSPD creates relationships and coordination elements with guidelines, creating improvements to training, and documents, including DoS Emergency Action Plans (EAPs). One key improvement, according to Doug Ellrich at the Office of Right Sizing the U.S Government Overseas Presence at DoS, is "The better prepared folks are for their overseas assignment, the better off we all will be." (Ellrich, 2005) The challenge to this NSPD is it must be crafted in ways to improve interoperability between the DOD and the I/A by providing a coherent and consistent voice for the mission.

Ideally, this document will provide the vehicle or coordination and cooperation both today and tomorrow for the JFC and the COCOM to leverage technologies and improve access to the vast intelligence the I/A partners possess. Additionally, the I/A should look at this NSPD as a launch pad for providing its contributions to the policy for PR as well as the doctrine for the mission. It is not necessary for the I/A develop its own separate doctrine; rather, the partners should ensure that their own equities are sufficiently represented and documented. This NSPD, once put into effect, effectively tells USG agencies and departments to coordinate, communicate

and integrate their capabilities for the PR mission. It would be unfortunate if even one USG person were not saved because one agency, service or component did not know the capabilities of another. The lives of U.S. personnel are too valuable to allow impediments in doctrine to prevent timely and accurate recovery.

Some of the services' concerns are well founded as they anxiously await the final version of this NSPD. One of the key issues is the increase in requirements for training, education and preparation of many new people participating in the PR mission to be placed under the responsibility of the services or a JFC. The concern is valid. Each service and COCOM must view this NSPD and the resources they provide to the I/A as a long-term investment in capabilities and access. The message delivered to the services surrounding this NSPD must be focused on long-term promotion and advancement of the mission. As Colonel Bracich stated, "The payment now from the services is in training, education, and possibly funding, but this will pay large dividends in the future via intelligence, sensors and access to many different technologies." (Bracich, 2005) While it is possible to transform the PR doctrine and mission area without the NSPD, the approval of this directive will indicate interest in personnel recovery at the highest level, outline a national policy for PR and provide a firm foundation for all other PR doctrine and documents. This NSPD is a win-win solution for the nation and the USG as they are all inextricably tied together waging the GWOT with minimal loss of personnel.

DOD Instructions and Directives

An important vehicle for conducting effective PR mission is "…clear, succinct guidance from the Department that you can use to develop your PR programs." (Jennings, 2004, 8) This statement by Deputy Assistant Secretary of Defense (DASD) for Prisoners of War/Missing Personnel Affairs (DPMO) Jerry D. Jennings frames the challenge perfectly. Reorganization and

reassessment of doctrine and documents is needed today to provide more clear and current guidance for the mission.

DOD Instructions (DODI) and DOD Directives (DODD) provide the next level of guidance for the service personnel recovery missions. Today, three key DOD publications guide personnel recovery operations: *DODI 2310.2 Personnel Recovery; DODI 2310.4, Repatriation of Prisoners of War, Peacetime Government Detainees and other Missing or Isolated Personnel*; and *DODI 2310.6 Non-conventional Assisted Recovery (NAR) in the DOD. DODI 2310.2* states, "It is DOD policy that: the DOD has a moral obligation to protect its personnel, prevent exploitation…and has a primary responsibility for recovering U.S. personnel." (DODI 2310.2, 2000, 3) This document requires some adjustments and changes to keep pace with the expanding battlespace. Additionally, all of these instructions should be reviewed and updated as some of the lessons learned form the operations in Afghanistan and Iraq have altered DOD policy on personnel recovery.

While *DODI 2310.2* provides policy guidance for some leaders and policy makers, the JFC also relies on a host of other documents to shape and steer his PR activities and actions. Joint doctrine forms this basis of reference manuals and go-to guidance to conduct PR operations. The doctrine of the joint forces must provide a distilled source of proven and simple guidelines and effective frames for PR.

Joint Publications and Doctrine

Policy documents provide a foundational guidance, while the doctrine supplies "…a military organization with a common philosophy, a common language, a common purpose, and a unity of effort." (JP 1, 2000, I-1) Doctrine is crucial for establishing commonality of employment from which components can plan and operate with a common purpose. It is an even

more important factor during the transformational process of the DOD. According to Colonel David O'Meara, USAF Doctrine Center expert to the Air Warfare Center at Nellis AFB, NV,

> Nowhere is this more critical as we advertise a transition to the Joint Force of the Future, but [we] have no means of writing, coordinating and publishing timely and relevant Joint Doctrine …which will guide utilization of this force. Personnel Recovery is an excellent example of this dilemma. The US went to war in OEF and OIF with no Joint doctrine on Personnel Recovery and with its Joint Doctrine on Combat Search and Rescue over 8 years old. This is not acceptable in light of the rapid changes we are experiencing in the tasking and employment of our Joint forces (O'Meara, 2005)

PR joint doctrine today does not exist in totality, but rather in many different documents that need review for content and cohesiveness. A draft version of *JP 3-50 Joint Doctrine for Personnel Recovery* written by JPRA and due in Summer 2005, breaks new ground in its title alone and seeks to aggregate three publications into one. It is one of the most important publications that will affect the PR community for many years. The draft version of *JP 3-50* seeks to combine *JPs 3-50.2 Doctrine for Joint CSAR*, *3-50.21 Joint Tactics Techniques and Procedures for CSAR* and *3-50.3 Joint Doctrine for Evasion and Recovery* into an aggregation of PR principles.

However, as the draft is written, the authors are taking the wrong approach to PR doctrine. Today, the pace of warfare is at an even increasing tempo with new concepts and capabilities emerging quickly. Therefore, doctrine must evolve with or at least keep pace with this speed of warfare, providing forces and commanders with the appropriate guidance. By developing one single source publication for PR, the potential exists for watered down doctrine, broad, but thin concepts and verbose language that few will read.

PR doctrine should instead consist of one capstone publication for PR and three supporting elements of this capstone doctrine. Under this concept, *JP 3-50* would remain as the *Joint Doctrine for PR*. It should define and scope all elements of PR, outline the C2 aspects,

define relationships, and explain the five tasks of PR in a joint and even interagency construct so participants in PR can benefit. By serving as a capstone PR document, it can be a mission area primer reviewing the overall definitions, command and control, supported and supporting command relationships for JFCs and other subject matters. Supporting publications should be three stand-alone documents covering PR TTPs, SERE, and Joint Doctrine for Repatriation.

Colonel O'Meara agrees and states, "The best step in the near future would be to capture PR TTPs (CSAR, SERE, Repatriation, etc) in a multi service format and work to build a rapid and responsive Joint TTP process for all aspects of the Personnel Recovery mission." (Ibid, 2005) By creating a capstone PR doctrine with three supporting publications, a coherent construct of joint doctrine can be achieved.

This proposal does create some challenges. All supporting doctrine must keep pace with the capstone publication. Additionally, each service and US SOCOM must provide relevant contributions with current TTPs and lessons learned that all support current concepts and proven structures for PR missions. These challenges, however, can be easily met and should be supported by all levels leadership with the PR community.

Personnel Recovery Tactics, Techniques and Procedures

One key supporting doctrinal document to the Joint Publication for PR is a compendium of TTPs for the missions of PR. Currently, this is *JP 3-50.21 Joint TTPs for CSAR*. However, PR also includes TRAP, NAR and SAR, all involving different TTPs. These areas should be addressed and covered for all services to reference. This newly designed PR TTP document should include TTPs on CSAR largely done by the USN and USAF, the USMC TRAP TTPs, and Army DART and specific PR procedures. Additionally, basic NAR procedures and TTPs should be included in this document because any service may be in a supporting role for NAR.

With one common source for TTPs, services and planners can have a reference encyclopedia for all the above missions to foster interoperability and enable jointness. For example, if USAF CSAR procedures and language are outlined clearly in this publication, service or component planners could reference this and easily work the USAF CSAR assets into the Fragmentary Order or the Air Tasking Order. Creating truly joint PR TTP will increase education, improve interoperability between services and construct a competent joint recovery force the JFC and COCOMs can rely upon. Information on NAR will enable the JFC, COCOMs, and in particular the supporting commanders to have a reference document that offers guidelines, command relationships and even some TTP so they can effectively build a NAR team with the JFSOCC. One challenge to adding NAR to this TTP is the classification level and the accessibility other participants may have to the publication. To answer this challenge, developing a classified annex of the TTP may be required.

Survival, Evasion, Resistance and Escape Doctrine

The second supporting document that can support the main PR doctrine is Survival, Evasion, Resistance and Escape (SERE) doctrine. Currently, *JP 3-50.*3 *Joint Doctrine for Evasion and Recovery* addresses "…general evasion and recovery considerations, moral, legal and operational guidelines for evasion." (JP 3-50.3, 1996, V) This unclassified SERE doctrine mentions little on survival TTPs and resistance TTPs, with few lessons learned on past evasions and recoveries. In an unclassified document, this is difficult to complete, but the information must be available to all DOD and USG personnel placed in harm's way. Classified doctrine solves one problem, but creates others. The largest impediment to this is simple access to secret documents, which must be expanded if select I/A partners are to contribute to the PR mission.

The secret annex should be made more widely available to all personnel placed in dangerous situations for review and study prior to operations commencing.

SERE doctrine is vital to provide individuals and commanders clear guidance on SERE issues, TTP and programs that help the individuals in combat. For the operational leaders, this document is also helpful by educating and refreshing DOD personnel on SERE TTPs. Additionally, with this information readily available, the JFCs and the JSRC and RCC staffs can rely on the command and control establishment portions, help prepare component RCCs, and most importantly outline a standardized and joint evasion plan of action (EPA) to eliminate confusing information when missions occur. As this PR doctrine is rewritten, all services must contribute and advocate for their services, as well as offer contributions to improve the SERE documents and doctrine.

Repatriation Doctrine

The third suggested publication to the 3-50 series should address a doctrine for the repatriation of USG personnel. Currently, *DODI 2310.4, Repatriation of Prisoners of War, Peacetime Government Detainees and other Missing or Isolated Personnel*, addresses some policy issues and procedural actions taken for repatriating isolated personnel. Some of the repatriation actions and elements are sensitive, yet commanders and the partners in the I/A should have a doctrine document that allows reference, provides guidelines and offers suggested structure for repatriation teams and cells during combat operations. Across the five tasks of PR (report, locate, support, recover and reintegrate), the repatriation process can sometimes be lengthy and involved for the IP, family members and the JFC. The important task is to formalize this process into doctrine, allowing the PR participants to contribute to this document and help provide the JFC with a relevant doctrine to plan from before the next combat operation.

Service and Basic Operational Doctrine

Supporting and providing input to the joint doctrine are the individual service doctrines. These represent how each service plans and conducts PR operations and delineate service beliefs of the mission. These documents include *AF Doctrine Document 2-1.6 USAF CSAR, US Army Field Manual (FM) 3-50 Personnel Recovery (draft), US Navy Naval Warfare Publication (NWP) 3-50.22 CSAR Manual and USMC TACAIR* publications, which present their service equities and design for PR. Service doctrine provides authoritative guidance for the individual services to use when they plan, prepare and employ power both today and in the future. To ensure interoperability and provide a coherent PR library for the JFC's or COCOM's planning staff, these publications should closely resemble each other in layout, organization and content. Carbon copies of service doctrine are not required, but standardization of content is the important task. JPRA/J7 should consider the option of providing guidance insight and assistance to each of the services and broker doctrinal meetings to agree on content and format.

Service TTPs and unit level SOPs form the backbone of the tactical application procedures for the units and crews. The USAF uses an Air Force TTP (AFTTP) series that provides proven TTPs to the crews, planners and commanders about the best way to employ a specific weapons system. Each AFTTP is re-written every 24 months by USAF crews. Subsequent rewrites must include other services inputs and considerations to assure the USAF PR forces grasp the operational and tactical concerns of the other services. Recently, USN HH-60 crews contributed to the HH-60G AFTTP 3-1 Volume 24 permitting cross-flow of ideas, concepts and advances in joint PR operations and a new AFTTP for PJs and SERE specialist was developed. The Joint Air and Space Tactics Center at Nellis AFB, NV develops AFTTPs and

integrates USN and USMC personnel on the staff to assure other service equities are adequately represented. This model works well to make TTPs fully interoperable.

Naval Warfare Publication 3-50.22 focuses on the naval aspect of PR and the CSAR of naval forces. The Navy should also strive to enhance the document by including how the Navy can contribute to the joint PR mission. Detailed data should be included on how the naval forces under the Combined Force Maritime Component Commander (CFMCC) can contribute CSAR capabilities of these forces to the JFC for PR missions.

Similarly, the U.S. Army, currently drafting *FM 3-50 for PR*, needs ensuring there are certain elements that other planners can use the publication for joint planning and operations. This FM should resemble Navy and USAF TTP volumes outlining C2 nodes, planning information, capabilities of the Army forces as well as addressing the five stages of a PR event. Most importantly, the authors of the FM must outline how the JFC can use these army forces under his Combined Force Land Component Commander (CFLCC) and delineate how the Army/CFLCC forces can assist in the joint PR mission areas.

Individual documents

Individual documents are a vital source to all of these doctrinal publications and policy guidelines. The services use a DD form 1833 as the Isolated Personnel Report (ISOPREP) that contains detailed information about an isolated person. A key improvement to the ISOPREP usage is to expand this coverage of an isolated personnel report to other USG personnel placed in danger and covered under the NSPD. This does not infer that PR forces conduct missions for every IP, but it serves as a baseline for an increasing number of potential isolated personnel.

The second personal document that needs addressing is the development of a Joint Evasion Plan of Action (JEPA). Services and US SOCOM use different formats of EPAs based

on mission, location, personnel and other variables. Standardization of an EPA will pay benefits in the future. By standardizing an EPA format containing specific information, actions and details personnel will execute while avoiding capture, the interoperability could increase amongst the services. For example, if the USAF is tasked with recovering an Army team, a clear understanding of the pre-determined actions in the EPA may help reduce location and recovery time. Just knowing where to find the EPA and the information contained therein is challenging. This standard EPA format should be published in the capstone PR publication and made interactive so personnel can submit is to the component RCC. Ideally, these EPAs would be in digital format, permitting rapid transmission of information across the battlespace. A standardized EPA could provide the JFC with a common reference for all IP actions and intentions as they conduct evasion activities.

With common data provided on the JEPA and the ISOPREP, both located on an accessible database that any component tasked with the mission can obtain, the recovery cycle for the IPs can be shortened. These documents will create a linkage from the IP to the PR forces that can use as a starting point of information forces can use to affect a rescue. Just as importantly, they will help the isolated personnel. The best PR doctrine or documents in the world in the world not help recover one person if he does not have the proper and accurate knowledge and tools that can be provided by a coordinated series of documents.

ORGANIZATIONS

Doctrine and PR documents represent one part of the DOTMLPF landscape that needs revision. The PR community must assess the need for organizational change to transform into a more viable force. The community of forces and personnel conducting PR help to achieve the JFCs overall intent and objective, but "…the PR community is not cohesive as a whole."

(Schwartz, 2004, 5) The Director of the Joint Staff accurately understands the common processes associated with the PR community and grasps the issue that the services must become more interoperable and joint when conducting personnel recovery missions.

In today's combat environment, organizations from the national level to the tactical level must transform and change to provide the JFC and combatant commander with effective and efficient PR forces. This is outlined in a transformational publication which states, "Organizational change is fundamental to transformation efforts…[w]e should expect organizational transformation to extend through small unit levels." (Military Transformation: A Strategic Approach, 2003, 27) National level organizations in the PR community must be able look forward and reach back with an evolving capability, keeping pace with a changing mission.

One important change to make is to reevaluate the role of the PR Advisory Group (PRAG). The group's mission is "…to review DOD progress toward developing a fully integrated PR architecture and review initiatives to support achieving the DOD goal of having a fully integrated PR architecture." (DODI 2310.2, 2000, 5) The PRAG is likened to an executive steering committee, meeting when directed, shaping PR policy, support functions, and providing operational advice to the DASD Jerry Jennings for Prisoners of War/Missing Personnel Affairs (DPMO) when it is required. The PRAG is one organization that needs to be redesigned and realigned to better serve the personnel conducting PR missions. Today especially, it needs to become a permanent fixture and organization in the DOD and requires the mandatory presence of COCOM flag officers. Doing so is crucial to advance the PR mission and protect the nation's most precious resource, its people.

The PR community has many people championing individual service and policy efforts, training and education as well as equipment issues. Executive guidance is increasingly needed

on issues, direction on the future of PR. In addition, along with DPMO, the PRAG can be a DOD champion for personnel recovery issues. DPMO and the JPRA, along with some I/A participants can help to redesign the PRAG to do so. The PRAG should be redesigned as a board of directors, comprised of four team areas, each contributing to separate areas of expertise in the mission area. DPMO can shape and guide policy; JPRA can focus on education, doctrine and training; and the Personnel Recovery Technology Working Group (PRTWG) can advise and recommend technology/equipment for support of the mission. In addition, a new I/A partner Coordination Team (IACT) could become a fourth pillar in this redesigned PRAG.

DPMO currently is the lead office for PR policy. It should expand its role and offer assistance and guidance to the I/A partners on their individual policies for PR. For example, DPMO should work with all of the I/A partners to assure that PR policy put forth in DOD does not conflict with State Department PR policy.

JPRA provides some training and education to the services for PR, but should also look at expanding its classes and training sessions to include more I/A partners. JPRA educates and prepares services for developing component RCCs. By placing some I/A representatives at JPRA or creating liaison positions within JPRA, DOD education and training can be married up with I/A training, doctrine and education. Doing this would ensure full advocacy of departmental issues and improve cohesion in the mission.

The Personnel Recovery Technology Working Group (PRTWG) currently exists to "… provide the PRAG and other senior DOD officials with balanced insights into the most applicable technological approaches to the personnel recovery mission." (DODI 2130.2, 2000, 8) This PRTWG has members from DOD, the National Reconnaissance Office (NRO) and the Defense Advanced Research Project Agency (DARPA) among others, but has no representation

from the CIA or State Department. (Ibid, 8) The technological concerns and capabilities of the unrepresented organizations can contribute greatly to the PR mission. The PRTWG should seek to organize and aggregate the technological issues of personnel recovery between military and I/A forces. The challenges are financial battles, agencies possessing the proper amount of trained and educated personnel and battles over the advancement of technological ideas and concepts needed for the PR missions of tomorrow.

The last pillar to the redesigned PRAG is a body of I/A coordinators who can make the appropriate input and offer solid representation for their departments. The coordinators who make up the IACT and should serve to seal the seams between the DOD and the I/A partners that participate in the mission. The important element these coordinators and their offices could provide is the needed continuity and steady representation needed at these meetings. The IACT efforts could also help eliminate stove-piped intelligence, focus technology on the mission and ultimately help ensure the return of U.S. personnel back to friendly control.

The board of directors within the PRAG must serve as a bridge between the DOD and the I/A partners to guide the PRAG on key issues and coordinate DOD and I/A elements of PR. The PRAG needs a developed streamlined process whereby the members identify the important issues of policy and other DOTMLPF issues and provide these insights to the respective participants. In addition, the level of representation must be clearly defined. The current guidance for the PRAG as outlined in DODI 2310.2 only suggests that the COCOMs "…provide a Flag Officer…if desired." (DODI 2310.2, 2000, 6) Mandatory participants should include COCOM representation, Commander of JPRA, and other key leaders in the PR community who can take the needed actions to assure a coherent I/A and DOD PR team. The best method for the PRAG to operate under is a structured process, facilitated by a series of conferences and

meetings to assure that the DOD, I/A partners and the national PR community is going in the right direction. These PRAG meetings should be deconflictted and coordinated with the service PR conferences, the DOD World Wide PR Conference and trade shows showcasing advanced PR technology. A graphical representation of the redesigned PRAG is in Figure 2.

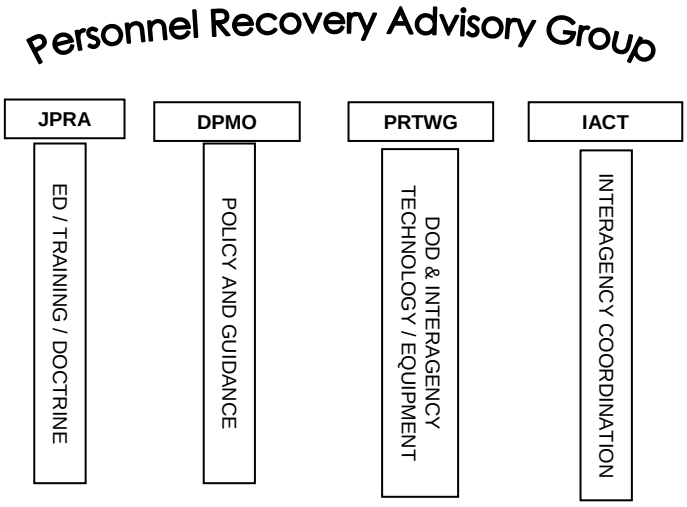

Figure 2. A Redesigned PRAG

Transformation at the operational level is vital as it links the strategic level and tactical levels together and fuses together other important elements like the Joint Interagency Coordination Groups (JIACGs) and the Standing Joint Force Headquarters (SJFHQ). These operational level organizations should be reexamined and altered to assure and provide the JFC with full representation and participation needed for a robust personnel recovery organization structure.

One key part of transformation is the development of a SJFHQ element. For the past few years, JFCOM has experimented with many concepts of C2. As recently as 2002, JFCOM "…formed a prototype of standing joint task force headquarters (SJFHQ) to demonstrate this concept during Millennium Challenge 2002 (MC02)." (Zimmerman, 2004, 28) The SJFHQ is

a "…team of operational planners and information command and control specialists…that focus on combatant commanders operational trouble spots." (http://www.jfcom.mil/about/fact_sjfhq.htm, 2005, 1) This is a good place for the transformation of PR to begin at the operational level of war.

The manning document for the "…standard SJFHQ is staffed with 58 people, plus a 6 man System of Systems Analysis (SoSA) cell." (Zimmerman, 2004, 32) This SJFHQ brings specific talents to the JFC's fingertips with core competencies in planning and conducting full-spectrum military operations along with many TTPs and tools. It easily serves as one cohesive team the COCOMs can use when necessary. Looking further into the construct of the personnel assigned under the SJFHQ and across the four cross-functional teams of operations, planning, information superiority and knowledge management, it is revealed that no dedicated positions for the conduct of PR operations. Without dedicated PR trained personnel embedded in a SJFHQ, the JFCs effectiveness for PR is reduced.

However, COCOMs have the ability to plus up and augment the SJFHQ as they see fit for the mission and "…[t]he exact composition and location of the SJFHQ could vary among the GCC [Geographic Combatant Commander]." (JWFC Doctrine Pam 3, 2003, 7) Dedicating just one PR trained position in the planning team or one to the operations team will help increase the effectiveness of the PR operations and reduce the ad hoc nature the SJFHQ is attempting to stop. It will provide the JFC with a dedicated PR source and conduit, and can help leverage and improve the mission via developing relationships, cohesiveness, and perhaps the most important element needed, an understanding of the mission area. European Command (EUCOM) is making changes like this today. Building on lessons learned from OEF and OIF, "USEUCOM observations…indicate the need for a PR C2 node on the GCC staff." (DOD PR

newsletter, 2003, 6) As the SJFHQ becomes operational, in the Geographic Combatant Commands (GCCs), the "…need for a PR C2 function at the EUCOM GCC HQ will be even greater." (Ibid 6) In early 2003, "[I]ssues remain [ed] concerning SJFHQ staffing requirements...and at a briefing to the Joint Requirements Board, USJFCOM was asked to work with the GCCs to more precisely identify their specific personnel requirements." (JWFC Doctrine Pam 3, 2004, 24) Based on these lessons learned, COCOMs should add dedicated PR expertise to the SJFHQ.

JFCOM has developed the Joint Interagency Coordination Group (JIACG) that

> [i]s a combatant command's designated lead organization for the interagency community providing… coordination and synchronization of agencies' activities within the command. It provides each CCDR with a trained and equipped staff element specifically organized to enhance situational awareness…In short, the JIACG provides the requisite interagency perspective to the CCDR in both joint planning and operations. (JWFC Doctrine Pam 6, 2004, 5)

This team of people in the COCOMs helps support the SJFHQ planners in campaign planning and operations. To succeed with the horizontal fusion of the I/A partners, technology, and DOD resources, the JIACG and the JSRC must be linked operationally. Doing so will maximize assets and intelligence in order to fully evolve and transform the PR mission before the next conflict. By creating linkages and C2 structure from component RCCs to the JSRCs, and through linkages to the JIACG, the PR mission will have enhanced command and control of forces with increased joint interoperability and interdependence.

The JIACG/JSRC relationship is optimized when the relationships are built before the mission happens. This is possible by adding specific personnel recovery billets to the SJFHQ core element promoting cooperation of COCOMs and their PR experts and ensuring that "JIACG members augment and are integrated into COCOM and JTF boards, centers, and cells during operations." (JWFC Doctrine Pam 6, 2004, 11) The JIACG can provide a variety of assistance

across the five stages (report, locate, support, recover, reintegrate) of a PR event. Careful attention to detail of fusing all of the information nodes the JIACG offers is a challenge for the JSRC to work through for the future.

In particular, the JIACG can contribute significantly across the locate, support and recovery stages of PR missions. Certain USG agencies have better sensors and assets than the DOD to accomplish this task and these must be used for PR missions. JIACG representatives must develop linkages and methods to leverage the technology their agency offers to help locate IPs in the battlespace. The JIACG can also support PR events with communications, imagery support, and intelligence assets that ultimately will reduce the time to locate and recover the IP.

Relationships created with the SJFHQ and the JIACG with personnel recovery personnel and experts is an important step to take. Combatant Commands must also assess their own PR command and control organization and structure and assess the need for change.

European Command (EUCOM) has a vision to "…design a flexible, lean, responsive and ready joint PR capability to respond to Commander, US EUCOM and SACEUR requirements." (DMPO Newsletter, Fall 2003, 6) Part of the EUCOM concept is "…an established requirement for joint PR forces in EUCOM to prepare for shipment, upload, download, reassemble and be ready for mission tasking within 48 hours." (Ibid, 7) This concept of a quickly deployable force is a welcomed organizational change and serves as a goal toward which all PR forces can work. This concept requires expansion to all of the GCCs, allowing the entire PR community to operate as a joint coherent force.

Having each COCOM develop these deployment standards is a step in the right direction for mobilizing PR forces. Today's landscape of conflict will require services and component CSAR assets be able to ready to operate in combat with little notice. During the planning for

OEF, CSAR and PR were key issues for the Chairman of the Joint Chiefs (CJCS) as "…[i]t was a bedrock doctrine with Shelton and most military officers [that] the combat operations could not commence without full search and rescue and…[since] the political impact of hostages could be even greater." (Woodward, 2002, 152) Seeing U.S. personnel paraded across the TV screen would have an impact on the commander's mission and on the national resolve. Timely placement of PR forces is one of the most important aspects of the mission.

Combatant Commands should seek to refine and develop PR readiness and deployment standards. Combat operations at any level of intensity must not be conducted without personnel recovery forces in place and prepared to respond. As the GWOT missions expand, many COCOMs looked internally at the PR mission areas and sought ways of making improvements. During OEF and OIF, Lieutenant General Renuart was the US Central Command J3 and helped create the PR infrastructure. He took this experience with him to Pacific Command (PACOM) as the PACAF Vice Commander. In PACOM, faced with a large area of responsibility and sparse forces, he looked at the current state of PR and concluded "…we hadn't thought about very well. We paid lip service to PR." He is seeking to "…build a 'coherent' and 'integrated' PR structure in the Pacific…[by] planning to stand up a full-time, 24 hours a day, seven days a week, JSRC so that the command can respond immediately to military or civilian rescue needs in both combat- and non-combat-related incidents." (Rees, Sept 2004, 1) This is a step in the right direction for personnel recovery.

The training of JSRC personnel, senior leaders and staff members will be greatly improved by having a 24-hour JSRC. Instead of an as-needed team of JSRC warriors, the JSRC personnel will gain familiarity of C2 assets, mission specifics, service TTPs and how the mission is conducted. Also, the senior leaders can learn about the JSRC at any time since it is always

operating, coordinating and learning how to perfect this mission in their region. Another benefit gained by this action is when the JSRC is already up and functioning, the commander is fully engaged in PR operations on a routine basis and has key insights into the capabilities and limitations of PR in the AOR. Most importantly, this coherent and integrated personnel structure taking shape with this 24/7 JSRC and will only improve the JFCs command, control and coordination for PR across the components of PACOM.

Other COCOMs should learn from PACOM's example. EUCOM has a Joint PR Coordination Cell (JRPCC) to fill a "…need [for] a PR C2 function at the EUCOM GCC HQ." (DPMO Newsletter, 2003, 6) This JPRCC will be located at the EUCOM Joint Operations Center (JOC) and will "…provide the command the big picture when it comes to recovery…without directly manage[ing] the PR missions themselves." (Ibid, 6) EUCOM's goal "…is to transform PR in theater from a garrison often service-centric force…to a responsive and ready joint force." (Ibid, 7) This is a sound beginning, but EUCOM should develop a common, component staffed JSRC. This JPRCC also seeks to "…free the air component RCC to focus on the executing of recovery missions," yet misses the issues that PR is a joint mission and all components need to participate, not just the USAF. (Ibid, 6) By developing this full-time component staffed JSRC, versus a JPRCC, key linkages to the JIACG and other I/A partners can be built and then leveraged for use when combat arises for easier coordination, operations, and interoperability across the DOD.

Southern Command (SOUTHCOM) has one of the strictest personnel entry requirements of all COCOMs. SOUTHCOM demands certain paperwork be filled out, training adhered to and other mandatory prerequisites completed for personnel entering the region. This is a model requirement that PACOM and EUCOM should strive for that can make PR operations easier

when called upon. These entry requirements permit SOUTHCOM leaders to know who is in theater, their travel plans and contact information and assures they have the proper individual training in a region where kidnapping and hostage-taking is commonplace. This data makes the mission of PR easier for all forces involved and can improve the interoperability with the embassies and other I/A partners in the region should a PR mission be conducted.

All organizations involved in the PR mission must take assessment of the five core tasks of PR and evaluate how their organization helps achieve results toward these tasks. These organizations can offer tenets of operation around which all U.S. government participants can conduct the PR mission around, avoiding the belief "…PR is no longer just a pick-up game," also acknowledging that more work is still needed. (Jennings, 2004, 15) These tasks succinctly capture the mission and quickly provide lines of operation for the personnel within the community from which to operate.

Each organization must reflect internally on how they are supporting the five personnel recovery tasks. Below are some questions for organizations supporting/conducting PR to reflect upon:

- **REPORT** – the notification that someone has become an IP
  - How can my sensors, intelligence nodes and assets help with reporting IPs?
  - Am I able to distill raw information into actionable intelligence?
  - Can all joint and I/A forces see my report and understand it?
- **LOCATE** – ability and action to find and confirm the authenticity of IP
  - What can I do to accelerate and accentuate this process?
  - Are others in the mission aware of my strengths and limitations?
- **SUPPORT** – ability and action provide to contribute to the recovery of an IP
  - Does my organization optimize its strengths to support PR missions?
  - Is there a center of gravity analysis, with critical requirements and vulnerabilities that I can exploit to conduct the mission?
- **RECOVER** – use of forces to pick-up the IP
  - Are my assets or recovery, either human or hardware optimized to gain possession of the IP?
  - Does this recovery mission meet the commander's intent and risk level?
- **REINTEGRATE –** placement of the IP back into unit and society without assistance

- Have all of my efforts focused on the individual's needs?
- What efforts have I done to support and assist the member's family?

These PR tasks must be well known to the strategic and operational leaders if the organizational construct of the PR mission is to change. By weaving these tasks into the redesigned PRAG, adding dedicated PR personnel to the SJFHQ, linking the JIACG to the JSRC and improving COCOM PR centers, progress will occur. As a result, the PR mission can achieve full-spectrum operational dominance and be widely prepared for the recovery of any IP in the battlespace.

TRAINING

Across the DOTMLPF landscape, training of personnel and forces for combat operations is one of the most challenging areas to address and change. Looking at the spectrum of training for the PR mission, four key areas of focus need to be addressed if the COCOMs and JFC are to have a more viable force to employ. These areas are the individual; the unit or team to which that person belongs; the service/component training and exercise participation; and lastly the joint force training that fuses all capabilities into a cohesive team with decisive combat power. This training not only applies to the personnel of the DOD, but also extends to the I/A partners. Each level builds upon the next and the element of trained individuals helps create a synergistic operational effect for the JFC.

The foundational element for all training is the individual. Each service uses its own vehicle to assure the training received by individuals is appropriate for the missions tasked. Similar to specific tasks for the individual's specialty, there are basic and comprehensive training elements people must have before sent into combat. Individual survival training, code of conduct training and a newly developed core captivity curriculum are steps in the right direction to assure individuals placed at risk of capture are trained and prepared.

As the battlespace expands in the global war on terror, "…more people are being put into more levels of risk in more environments." (Miles, 2004, 1) These people require minimum levels of training and education to prepare them in the event they must survive, evade, resist or even escape. This type of individual training is important not for just personnel on high-risk missions. Everyone placed on the battlefield must have entry-level training in all elements of SERE TTPs. The services owe this basic requirement to their own personnel and in return, the personnel trained must do their best to uphold the concepts and ideals of the SERE training. However, just conducting the training for all personnel placed in the battlespace is a large challenge for the services and the interagency partners.

There are three levels of SERE training across the DOD. Level A is simply Code of Conduct (CoC) academics. Level B is SERE academics, while B+ has some practical exercises for SERE. Level C is level B academics and some resistance training exercises and C+ is a tailorable program based mission and needs. (Joglekar, 2004, II-20)

Currently, not everyone who is put onto the battlefield receives the appropriate level of SERE training for his or her assigned missions. This was realized when the 507th Maintenance Company was ambushed in Iraq during OIF and they "…had no training in what to expect or how to behave in a prisoner-of-war situation." (Miles, 2004, 1) One of the most famous POWs, PFC Jessica Lynch, was a member of the 507th and the story of her captivity and subsequent rescue was watched by the nation.

Although little to no formal training was provided to the 507th and other units in the war, some personnel managed to survive and return, while others were killed in action. It is the responsibility of the USG, I/A partners, services and the COCOMs to determine the type of

training required for its personnel who are put into danger. Putting USG personnel at risk without proper training is unacceptable. Many methods may be used to solve this problem.

With the assumption that the war on terror will continue for many years, each service must instill the appropriate level of SERE knowledge at all levels. When the basics of SERE training is instilled from day one of a person's career, reaffirmed at technical schools and debated and experiences shared at PME locations, individual readiness, ability and preparedness will increase. These efforts will help prepare many individuals for SERE situations and could help services refine/review their SERE training requirements.

JPRA can offer mobile training teams, distance-learning modules and other venues to train the services trainers in SERE and CoC. Interagency personnel, who operate together with DOD personnel in combat environments should have their individual readiness and training should closely resemble the DODs for common language, TTPs and training interoperability. Currently, the I/A does provide some elements of PR training but "…requirements for non-DOD interagency SERE training have not been identified." (Joglekar, 2004, IV-9) Personnel placed at risk deserve the best training available to be adequately equipped with the knowledge, skills and abilities for SERE situations.

Unit level training

A trained and ready individual contributes to a trained and ready unit or team. As the Joint Training System primer states, "Commanders are the primary trainers" and they direct the tasks the unit, squadron, battalion must accomplish to be ready for the assigned mission and purpose." (CJCS Guide 3501, 2003, 31) Training must support the vision of the key tasks the unit is required to perform in combat or contingency operations. This training is challenging to perform properly and efficiently while addressing all the mission essential task listing (METLs)

skills. However, it is important for units to focus on the applicable service core skills of an USAF CSARTF package, USMC TRAP team, Navy Strike Rescue or U.S. Army DART team. Service experts must be foundationally rooted in core skills before they contribute in a joint force. Unit training for PR operations should focus on component core competencies, and then gradually expand and build to a joint level training regimen for full interoperability of forces ready and able for the JFC to utilize.

Service/Component level training

The third level of training important to the JFC is at the service and component level. Here the services perform core service skills, refine the TTPs, and prepare against service standards and evaluation criteria. These forces must be competent in their mission area and contribute to the joint forces. In the PR mission, this training is composed of the CSARTF for the USAF forces, TRAP team procedures and mission rehearsal for the USMC, integrating the DART concept into Army brigade or division level training and assuring the assets can perform the RCT concept for the Navy's CSG or ESG.

Additionally, each service has specific exercises they use to refine these core skills and abilities prior to actual combat. The US Navy sponsors Desert Rescue, a dedicated CSAR exercise hosted by Naval Strike and Air Warfare Center at Naval Air Station Fallon, NV, which is the only true, dedicate rescue exercise in the DOD. (Ripley, 2000, 2) Although acceptable, the mission of PR needs training and exercises with a broader construct versus a deeper one.

One independent study recommends the JFCOM/J7 develop "…an annual CONUS-based 2 week joint exercise dedicated specifically to PR." (Joglekar, 2004, V-29) This is the wrong approach to take for a variety of reasons. In order to transform and have a evolution of PR in the DOD and I/A, PR must be woven into every training aspect of every services mission and

exercises. By having a two-week exercise once a year, people will only care about PR at the time of the exercise, and the remainder of the year not think about it. The way to infuse the mission and thought process of PR into the services today is to take a broad focus and not a deep concentration. It is it much better to have 80 percent of DOD personnel know the basics of the mission and PR concepts than to have 20 percent of the forces know the PR mission to an expert level. By educating, training and preparing the bulk of personnel in each service on the PR mission and instilling a continual thought process about these missions, a broader scope of personnel will be able to execute the mission for the JFC.

Similarly, the I/A partners and other USG personnel under the protective umbrella of the NSPD should also reassess their efforts to educate and train broadly versus deeply across the departments and agencies. To further capitalize on the learning and education process, each service has its own depository for exercise, training and deployment lessons learned. By creating a database of all lessons learned and TTPs reinforced at JRPA, JFCOM can take an important step forward as the lead trainer and provide this information to all personnel performing PR.

JPRA currently provides lessons learned from CSARs in past combat operation but JFCOM should work with JPRA to expand this program. Needed expansion includes collecting and advertising service level exercises and reports from CSAR, TRAP and SAR operations to promote the tenet of training and educating all members in the mission area. An ideal location to begin is creating a site or linkage to the Joint Center for Operational Analysis-Lessons Learned (JCOA-LL) at the Joint Warfighting Center under JFCOM. By identifying all of the services lessons and observations the PRAG and COCOMs can be made aware of current challenges to the services in the mission area. This can help the refinement of TTPs and service training documents as well as also promote interoperability whereby one service can read after action

reports of another services' training and exercises and learn from recommendations and issues uncovered.

Having sound individual training elements that support unit level training which focuses on its core skills and competencies for PR of its parent service, the Joint Force Commander will have what he needs the most today: a well prepared, educated and ready joint PR force. Similarly, by energizing the education and training of the I/A partners in the JIACG within that COCOM, the JFC has all the assets needed to affect any mission - CSAR, TRAP, NAR or SAR - under the PR banner. Over 100 COCOM exercises are scheduled for FY 05 that are tied and vested through training and component level exercises. Each of the 39 exercise scheduled for EUCOM, 15 for PACOM, 28 for CENTCOM, 6 for NORTHCOM and 17 for SOUTHCOM must include elements of PR training. (J7 Brief, 2004, slide 9)

For those exercises still in development, COCOMs should include PR events and scenarios as well as CSAR sorties. Other exercise venues can include live, virtual or even constructive means just to grasp the C2 complexities of the mission, identify the strengths and weaknesses of their JSRCs and determine shortfalls. From these exercises the COCOMs perform, identifications in material issues can be highlighted. These exercises may reveal communications incompatibility issue, intelligence gaps in fusing information or other elements that could impact a personnel recovery mission.

MATERIAL

One key to successful PR missions is to have the necessary material items, products and technology that support the five stages of the PR event. The commanders/leaders, the IP and the recovery forces that participate in PR missions within the battle space require the right materials at the right time in order to perform the right tasks. Today, there are different material items

including products and technology that can assist in accomplishing the five PR tasks. Anything used must be simple to operate, compatible across the services and provide value added to all personnel and forces involved in the mission. Three problem areas needing review and transformation: the communications equipment consisting of survival radios, mission management software that works in a joint and interagency collaborative information environment (CIE), and an oversight structure to oversee these material transformational material issues. DASD Jennings from DPMO frames the difficult but achievable goal for material transformation by stating, "A transformed PR function is one in which our recovery forces are equipped with state-of-the-art technology that operates seamlessly from survivor, to recovery force, to command and control-regardless of the service, interagency partner or ally." (Jennings, 2004, 5)

The leading problem with material issues surrounding the PR mission is the many different survival radios in the battlespace, and the fact the "…systems are not available in adequate numbers and that multiple systems result in interoperability problems." (Joglekar, 2004, 15) In OEF and OIF, four different communication devices (PRC-90, PRC-112A, PRC-112G, and Combat Survivor Evader Locator (CSEL)) and two types of satellite phones, (Iridium and INMARSAT) populate the battlespace. These radios communicate on similar frequencies but have different capabilities, which may change tactics of the recovery forces or the IP. Additional problems also occur when the rescue forces do not know the communication capability of the IP, or when the IP is not properly educated on the use of alternative techniques to assist the rescue. According the Institute for Defense Analysis (IDA) final report on the Interagency National Personnel Recovery Architecture, "R&D of and acquisition of PR command and control systems are not managed as an integrated joint program within the

DOD…and most PR upgrade programs have low priority in the Services…" (Ibid, V-11, 12) This represents a causal factor to why the communications equipment for the mission area is cause for concern.

One of the solutions for the mix of radios within the services is the further development and fielding of the CSEL radio. The current requirement for communications has "…grown to over 40,000 radios" and the CSEL is purportedly tasked to fill that gap. (Rees, Oct 2004, 1) This new radio is a "…joint program between the Air Force, Navy and Army which in the end will provide a reliable 24-hour two-way near-real-time secure messaging and voice communications system." (http://gps.losangeles.af.mil/csel/, 2005, 1) However, since its inception in 1996, CSEL has been slow to get into the hands of the warfighter and had lackluster performance. On a recent deployment, Carrier Air Wing-14, aboard the *USS John C. Stennis*, used/tested CSEL and ultimately concluded it needs a "…top to bottom review of the system architecture." (CSEL Initial Lessons Learned, 2004, 8). Additionally, Pentagon Director of Operational Test and Evaluation Thomas Christie stated, "…testing was adequate and CSEL is operationally effective….[but it] is not operationally suitable [and its] message success rate, supportability and training must improve to ensure successful recovery operations." (Rees, Oct 2004, 1)

The solution to this problem is presented by DASD Jennings, who stated, "While continuing to look to the transformational survival radio of the future, we must stop wasting our time arguing which survival radio is better and commit to integrating what we have." (Jennings, 2004, 10) The right course to take is the joint integration of the needs/requirements of each service, US SOCOM and the I/A partners. It is not necessary to abandon the CSEL program; in fact, the solution is quite the contrary. To ensure that CSEL is an interoperable PR radio

operating transparently through the seams of the DOD and the I/A, the PRTWG of the PRAG must get involved. Services and other USG departments must include the CSEL program in budgets, modernization plans and visions for the future. One service or I/A department cannot and should not fund this joint program. Instead, the solution lies in convincing the service chiefs and leaders in the I/A that this CSEL radio is an investment for the future, helps the JFC conduct his mission and is one of the best ways to protect the American lives in the battlespace.

Bolstering the CSEL is to energize the COCOMs and enlist their support for a viable PR radio that is interoperable and easily useable. The isolated personnel, COCOMs and the JFCs deserve operational and functional material for PR. COCOMs and JFCs must insist on having an interoperable, coherent survival radio system and architecture that can make PR of all USG personnel in their AOR easier and less costly in the loss of lives.

The second material problem is the necessity for interoperable and collaborative mission software that spans across, supports and enhances the tasks of PR. Such software would improve the effectiveness of reporting, locating, supporting and recovering of the IP. Currently, each of these four tasks are completed with communications, radios, sensors and human interface, sometimes with collaboration and coherency, other times not. It is unclear whether the coalition forces got lucky with the 100% recovery figure in OIF, or are just that good in the mission area. The DOD and the I/A partners cannot afford to become comfortable with that figure and must seek ways to improve and advance the mission area.

The development of a Joint PR Collaborative Tool Suite (JPRCTS) would help to augment the command and control aspect of the personnel recovery mission. Currently, Personnel Recovery Mission Software does exist, but can be improved and enhanced across the services and the interagency departments as it offers little interface for an expanding mission

area. At the component level RCCs, there are many different systems make planning, decision-making and operations easier. These systems include Joint Time Sensitive Target Targets Manager (JTSTM), Internet Relay Chat (mIRC) and Automated Deep Operations Coordination System (ADOCS). (http://www.gdc4s.com/Products/adocs.htm, 2005, 1) Clearly, these systems enable efficient decision-making, but standardization of information is one key element to an effective PR mission since time is of the essence when locating and recovering an isolated person.

The mission of PR begins with the reporting of a person isolated from friendly control. This starts the mission planning and coordination process and sets the stage for the next three steps of locating, supporting and recovering. Currently, as a person is reported missing, parallel planning begins all with one purpose, to recover the IP. The first four tasks of the mission can be enhanced, made interoperable and standardized with a JPRCTS capability that also reaches the interagency partners, possibly through the links to the JIACG. This tool suite for PR should be compatible across the services and permit access to and from the interagency intelligence systems. Ideally, JPRCTS will link planners, commander and forces together fusing information, current intelligence and rescue missions that can support the recovery effort. Additionally, it should be linked to other mission planning tools that provide threat analysis and a common relevant operational picture as well as allowing access to intelligence and sensor data that help to distill information into actionable intelligence for PR forces.

Further, JPRCTS could be developed, exercised and tested at numerous service, joint and interagency exercises before becoming operational. This tool suite should be a portable system that can be used equally well on a Navy ship or in an Army battalion and capable of integrating into existing I/A technology. This JPRCTS could also serve as a backbone of a PR Collaborative

Information Environment network, easily integrating with other systems and helping to improve the decision process for the JFC, facilitating informed and timely decisions for the PR mission.

Communications equipment to locate and support recovery of the IP is critical to the mission requirements as is with interoperable, collaborative software. All of this technology matters not if there is no oversight on the material items, ensuring they work, are interoperable and simple to use. Services use the battle lab concept for experimentation, testing and fielding of new technology for warfighters. The USAF has seven independent battlelabs for issues from Unmanned Aerial Vehicles to Information Warfare. The Army has nine battlelabs focused on issues from Combat Service Support to Space and Missiles. The USMC has a Marine Corps Warfighting Laboratory and the Navy uses a Maritime Battle Center for advancing naval warfare. (http://www.au.af.mil/au/awc/awcgate/awc-forc.htm#batlab, 2005, 1) Even JFCOM has a Joint Experimentation Directorate (J9) and a Joint Futures Lab (JFL) chartered

> to develop, explore, test, and validate 21st-century joint concepts for our nation's warfighters…and collaborate with the military services, U.S. government and …other combatant commanders to validate those concepts and to provide recommendations to our nation's military and civilian leadership. (http://www.jfcom.mil/about/abt_j9.htm, 2005, 1)

None of the services or JFCOM has battlelabs advancing the material concepts and solutions for PR missions. JFCOM should take action to remedy this issue. DASD Jennings mentions the current problem stating,

> Let's face it—we are going to have both the CSEL and the HOOK-112 in the inventory, and probably a few other types of radios. Our goal must be to ensure that regardless of which system a survivor might have, it is transparent to our recovery forces and command and control nodes. (Jennings, 2004, 11)

Although the services are required to provide equipment for their own forces, each must ensure the material and technologies it uses is interoperable with those used by other services. The best

way to remedy this discrepancy is develop a PR Division (PRD) in the Joint Futures Laboratory at JFCOM.

At a 2001 PR conference, the concept of a PR battle lab was introduced, but it has never been implemented. Assistant Secretary of Defense for C3I, Arthur Money, stated,

> There has not been any consistent effort to do the R&D, let alone commitment to field the best systems…to help the survivor. With establishment of a DOD PR Battle Lab under JPRA, the whole R&D aspect may be underway. (Money, 2001, 5)

This challenging task laid down in 2001 needs to be revisited today with the development of the PRD at the JFL in JFCOM.

This PRD in the JFL will ideally be responsible for coordinating service requirements and needs for PR technology, material and for distilling these ideas into concepts and products as well as for helping to promote, test and field these technologies within each service. The PRD can also work to remedy some of the problems with CSEL and survivor tracking and identification as well as develop a new JPRCTS program to assure the mission area advances with the pace of warfare and technology. The mission and charter of this PRD must assure technological advances in reporting, locating, supporting and recovering IPs are examined and introduced to the PR forces. An ideal appendage of this PRD is assistance and support from I/A's technological concepts, making sure that all USG personnel under the NSPD for PR are able to communicate and affect their recovery.

An additional step required for transforming the material and technological aspects of the mission for this PRD is the development of a PR Ethernet. This Ethernet can begin as a large repository for lessons learned that addresses all service PR mission, functions and exercises as well as combat issues currently in play. It should be capable of plugging directly into the JPRCTS, allowing the forces and the commanders to contribute and view lessons learned, after

action reviews, and historical mission data that can document and track issues and concerns across the DOTMLPF landscape from every PR mission.

This Ethernet repository could provide an important feedback and reach back process to all of the forces in the PR mission area. Allowing access to what each component RCC has accomplished along with the lessons learned from the JSRC and other PR centers will only improve the conduct and capability of the PR mission. Lastly, this Ethernet should be interoperable with the Joint Center for Operational Analysis-Lessons Learned (JCOA-LL) at the Joint Warfighting Center under JFCOM. This would allow all support elements of the PR mission ability to view recent PR missions, understand the lessons learned and help foster learning and improve education/training for PR missions.

If the services are to transform, become interoperable and focus on capabilities, these material changes need to be addressed and implemented for change. As the realm of warfare changes and evolves in the GWOT, the mission of PR must evolve as well to keep in stride with technological changes and material advances. However, while technology transformation is an enabler, it is neither a sirens song nor replacement for coherent human thought.

LEADERSHIP

Keys to success in any mission area are the leaders, commanders and directors making key decisions daily and over the long-term that chart the course and provide overall guidance and direction. In the mission of PR, there are different priorities and dissimilar equities represented by each unit, service/component and COCOMs that require equivalent attention. All of them seek the same outcome: the recovery and return of the IP back to friendly control. The leadership of the units, services and COCOMs as well as the I/A partners must possess the knowledge, skill and ability to make timely and critical decisions affecting PR missions.

Senior leaders appreciate the PR mission and desire to conduct it effectively and efficiently, yet they sometimes do not know the best way to carry out the specific missions of PR. According to the IDA Study on the National PR Architecture, a sample of senior leaders "…concurred that more senior leader education and awareness were needed." (Jokelgar, 2004, 14) The remedy is assuring key leaders from the strategic to the operational level and some even down to the tactical level are educated, practiced and experienced with the knowledge, skill and abilities needed to provide timely decisions and vision within and for the mission area. According to Lieutenant General Michael Short, the Combined Force Air Component Commander for OAF,

> I did not anticipate the degree to which I would become involved in tactical decisions during the CSAR – I should not have let that happen, but no three star likes to say " I don't know or please ask the right folks your question"…secondly, the attention generated by a CSAR is intense – from the JFC right up to the White House and all stops in between. (Short, 2005)

Education cannot take place during major combat operations. JFCs and component commanders must be educated and prepared for all aspects of personnel recovery prior to conflict. This can be achieved with a common voice for the mission area, continual education of key leaders in the DOD and the I/A, and through the development of a combined vision for this mission.

Lieutenant General Schwartz presents a charge to the community, stating

> effective leadership can bring PR activities closer together and provide advocacy for common purposes. Leadership may not be able to make all changes, but it can set the stage for change and that is precisely why we are here today. Regardless of its form, leadership must act! Ultimately, we need to transform PR to enhance the survival of military and civilians alike, and maybe contractors as well, with a compelling capability to rescue America's most valuable resource, its people. (Schwartz, 2004, 8)

What is needed is a common and coherent voice for today's mission as well as the vision for the future. Education of senior leaders is an important part of the needed change in the mission.

Once personnel are captured, the decisions senior leaders make will be based on the training they have received and their experiences. According to U.S. Marine Corps General Anthony Zinni, former Commander of U.S. Central Command,

> Isolated personnel have huge political capital and once they are captured, quick decisions are required to begin the mission. Commanders must be comfortable making these decisions and this comfort can improve via educating these leaders and exercising personnel recovery scenarios in a joint environment. (Zinni, 2005)

JPRA offers a one-hour course (PR 189) that is designed "[T]o familiarize senior leaders with their roles and responsibilities to prepare, plan, coordinate, and execute PR." (PRETC Course Catalog, 2004, 8) This course is a solid start, but will need altering if PR is to transform. This course should be expanded and widened to include significant elements of the I/A leadership in the education process. This action is vital since most the I/A departments have assets and leaders that can shape the contributions they provide to the mission if properly educated. Leaders promoting education of personnel recovery is a solid first step.

This education does not stop in the classroom. Quite the contrary, most of the teaching and learning is accomplished in the field when the missions happen and during the debriefs of the forces and the IP. The leaders of the PR mission include the COCOMs, senior USG representatives and Service chiefs, but most important are the JFCs and the JTF Commanders at the operational level conducting the operations. All of the leaders should seek and push to receive the training and courses in the mission, but they must also advance and promote this mission within their own commands. Instilling a culture and mindset of the PR mission across different organizations is one key to educating the leadership and aid in the transformation of PR.

In addition to educating the leaders, assuring they have the requisite skills and experience to lead the mission is important. This can be accomplished through various levels of exercises, senior leader discussions on PR, warfighter talks between services and other venues that bring

leaders together discussing PR at the strategic and operational level of war. These leaders must ensure I/A leaders are present and open discussion is conducted to advance this national mission. The change agent for the leadership transformation in the mission area is largely JFCOM. JFCOM and its senior leadership must actively promote the PR mission across its own organization and should ensure the forces entrusted to it are trained for the mission.

To help promote the mission and provide some more guidance for the leaders in the mission area, JFCOM and JPRA should introduce new and universal PR truths. These truths should be widely publicized, embraced by all and serve as foundation and the cornerstone to the mission as it transforms in the many years ahead. Out of all of the PR truths, the first one is the most important and supported by the comments of Lieutenant General James Chambers, USAF, former Director for Contingency Operations at U.S. Air Forces Europe, when he pointed out that,

> During Operation Deny Flight (enforcement of the no-fly zone over (Bosnia-Herzegovina) the Joint Force Commander (AFSOUTH), Admiral Mike Boorda, delegated the authority for CSAR to the Combined Air Operations Center Commander. He directed that all available assets for SAR be considered in event of a downed aircrew. His guidance to the CAOC was that selection of assets would be made without regard to which service or nation gets the credit/tasking but rather how best to do the job at hand with the assets readily available. (Chambers, 2005)

When combined with the other enduring truths, these principles will help guide the Joint Force Commander through a successful personnel recovery mission. These truths can also provide a needed vector and overarching guidance to the I/A partners shaping their decision-making process and vision for their contribution to the PR mission.

Four PR Mission Area Enduring Truths

- **Recovery and Return are vital aspects and credit for the mission does not matter.** *The outcome of the mission and returning the isolated person to friendly control is the mission and it makes no difference who conducts the mission.*

- **Timeliness and accuracy of intelligence and forces are two keys to success.**

Timely data in an accurate and coherent format foster mission success and provide key support to the mission.

- **The commander's intent for PR should always focus on the reporting, locating, supporting, recovering and reintegrating of the IP.**
  Weaving the five tasks of PR into the mission and commanders intent for PR are vital to the success of the mission.

- **Every available intelligence node, operational asset and person should be engaged in the mission of personnel recovery.**
  There is no higher calling or noble action than saving the life of a fellow warrior from a hostile force.

PERSONNEL

While leadership within the mission area is a key change agent to the transformation of PR, the personnel across the services, COCOMs and the I/A are the executors of this change. The JFC wants a viable, robust and ready PR mission and force, and to do so he must have the people to execute the five core PR tasks. Two key problems persist today within the realm of personnel in the mission area. First, not enough individuals are trained and equipped with the requisite skills and ability to adequately conduct the mission and provide sufficient C2 over the mission. Second, all service and I/A personnel need to have a better understanding of how each contributes and advances personnel recovery and how they integrate into the mission and conduct operations for the JFC.

People conducting the mission must have the knowledge, skill and abilities to understand the complexities and then be able to effectively command and control. Just-in-time training and preparation for this mission is the wrong approach for services, COCOMs and I/A partners to take. The remedy for this is to identify a PR core skill set for pre-determined personnel who will then populate a COCOM RCC and even JSRCs.

This process of identifying people who can readily perform the tasks should start within the services and individual departments in the I/A. Currently, people are assigned somewhat

randomly to work in RCCs and JSRCs since “PR command and control is not a career field in any of the Services. [Consequently], when the need arises in a combat theater, people have to be trained on the job….with the exception of CENTCOM who uses augmentees.” (Joglekar, 2004, 15) This is a problem and should be fixed at the earliest opportunity. Ways to solve this dilemma can be approached in a three-step process. First, the services and the COCOMs collectively should identify, with the help of JFCOM and JPRA, core skills, tasks and competencies required; these should be mandatory to work in the component RCC and JSRC. Secondly, they should work to assure the proper number of trained people who can fill these positions in the RCCs and JSRCs are identified prior to combat operations. Finally, services need to permanently code who has been a qualified as a member of an RCC or JSRC.

Across the five tasks of PR - report, locate, support, recover and reintegrate - the people in the component RCCs and JSRC must be able to assist. Organizations must have trained personnel to contribute to these tasks. Each service and component must take the steps necessary to outline key skills and required competencies needed to work in an RCC during combat operations. As a start, JPRA provides training venues and offers over 15 courses covering PR operations. The services can and should work with JPRA to help identify the core competencies of PR command and control and work in concert to make adjustments and improvements as needed. (PRETC Catalog, 2005, 8)

Services, components and JFCs should dedicate adequate energy and time to express the key skills and abilities to coordinate and control personnel recovery missions. Although each COCOM has different mission requirements, there are common tasks throughout the mission. Through exercises, training events, and lessons learned from combat operations, services and COCOMs can identify the required core skills a JFC will need in the next combat operation.

The second step can be achieved by each COCOM working with the services to develop a standing component RCC and JSRC manning template. In the current *JP 3-50.2 Doctrine for Joint CSAR,* Chapter VI addresses support requirements, but gives little guidance on core skills and abilities, using ambiguous language including, "Personnel should arrive trained in planning, coordinating and controlling CSAR missions…. and be knowledgeable in their own services CSAR capabilities…" (JP 3-50.2, 1996, VI-1) This offers the JFC and his PR team a wide array of interpretation for the skills and ability needed to provide the proper ability of the people in the RCC or JSRC. These tasks and skills should be identified within the service components with the assistance of JPRA and supported by the COCOM. This reduces the ad hoc conduct for manning, planning and organizing for PR operations at the COCOM level.

The third step is more difficult to achieve. After these skills are identified and a standard RCC manning template created, each service should code and identify these trained personnel. These recognized and trained people would then be easily identified to fill component RCC positions and populate the JSRC. This eliminates the need for just-in-time training by creating a standing database of personnel identified via their Air Force Specialty Code, Army Military Occupational Specialty (MOS), Navy Additional Qualification Code and USMC MOSs that the JFC can call upon when the mission requires personnel recovery. The idea does not infer that a person's core skill of a pilot or intelligence specialist should be eliminated; rather it suggests the creation of an additional identifier for JSRC or RCC positions.

One way to promote an accurate understanding of the mission across the services and promote broader education and information awareness is to leverage the JFCOM Joint Manpower Exchange Program (JMEP). JMEP seeks to "…take personnel from their respective branch of service and exchanges them to fill another service's billet at one of their commands."

(Benigni, 2004, 1) The PR community across the services should take advantage of this program, promoting the cross-pollination of the different capabilities of command and control and execution of the mission. Although a pilot program, JMEP can help provide the indirect training and education of personnel that participate in the mission across the services and act as a conduit between services when joint PR missions are being planned and conducted.

For example, when an Army corps heads into combat, most likely the Corps Commander would become the CFLCC. Army and other commanders can use JMEP to gain exchange officers coded and identified as RCC and/or JSRC personnel from other services who can provide expertise to a service that has traditionally put PR as a secondary mission. This could help to foster interoperability amongst all of the services, and create those inter-service relationships within the PR mission that can be leveraged when personnel recovery missions are used in combat operations.

FACILITIES

In order to support the doctrine, training and personnel needed to transform the PR mission area, the facilities to perform all of this must be available and updated. The two main groups of personnel whose facilities require discussion are military personnel and USG civilians and contractors. These two groups of personnel are placed in situations and locations where risk of capture is likely. Training at certain locations and facilities is required to prepare them. The military facilities for PR are mainly SERE schools, training venues and classrooms. The interagency facilities are more problematic and widespread across the I/A landscape because "…[t]here are no dedicated facilities for PR in the non-DOD interagency community." (Joglekar, 2004, IV-11) Each of these groups of personnel deserve adequate training and preparation for

contingency operations. Therefore, the facilities that prepare these individuals require attention and redesign to assure all are trained for a variety of situations.

The current problem with the military facilities that prepare and train individuals for SERE and captivity training is a lack of space which has resulted in a growing backlog personnel requiring training. Each service is responsible for this training but according to recent studies, while "…[e]ach of the SERE schools occupies permanent facilities that are adequate for current throughput….none have facility capacity to accommodate a significant increase." (Ibid, V-13) DASD Jennings recently noted the problems severity and need for attention stating,

> We have identified severe Code of Conduct training deficits. We have over 1.4 million men and women at risk of capture and exploitation who require Level B Code of Conduct Training. We have 30,000 who require Wartime Level C Code of Conduct training, and We have another 90,000 who require Peacetime Level C Code of Conduct training. And by the way, those numbers don't even address the issue of contractor and government civilian training. (Jennings, 2004, 13)

Clearly, this requirement is difficult at best for the services to handle with only three SERE schools operating. Facts like this only create problems for COCOMs and JFCs when they conduct combat operations. The collective PR community should help fix this problem. One partial solution is the completion of core captivity curriculum that is under development would provide key training and preparation for at risk personnel at the services' SERE schools and possibly at initial military training. (Miles, 2004, 1)

This program, once it gets started, is a step in the right direction to help the services, but more is required. This training should be altered and amended to provide the interagency personnel the same knowledge and skills. Offering this level and aspect of training to foreign service officers could help better prepare embassy personnel for the possibility of being taken hostage. Additionally, this should be expanded to include USG contractors who support military operations.

The challenge is where to train all these personnel. Integrating this training into current programs at service schools and I/A training programs is a sound start, but the need for a national SERE school should be examined. This school would be akin to the DOD approach to many shared skills in the military. Some services combine training efforts to reduce duplicated efforts including free-fall parachuting, combat divers course (Army, Navy and Air Force partners) and even basic flight instruction. The PR community should follow this lead and collectively develop this national SERE school.

All services are inherently different in their missions, but the need to train for SERE is a common linkage to all services. By creating a DOD level school and an aggregation of trainers, TTPs and scenarios that focus on basic SERE knowledge, joint core captivity skill sets and interoperable opportunities, the DOD can begin to remedy the shortfalls in training. Additional benefits include fostering joint interoperability, cross-fertilization of SERE and PR ideas and concepts that can offer a more cohesive joint PR team to the JFC. Funding for this school should be provided by each service and organized by JFCOM as the lead trainer for the services. Ideally, this school would provide sufficient throughput for all services, provide mobile training teams for more training opportunities and distance education services for study convenience.

In conjunction to creating this national level SERE school, the PR Education and Training Center (PRETC) should be changed into a PR Center of Excellence (PRCOE). Located in Fredericksburg, VA, the PRETC is responsible for "…educating DOD and selected other national and international PR professionals both civilian and military…in the art and science of executing joint PR operations." (PRETC Catalog, 2004, 1) It offers different courses focused at the military forces, but should seek to expand their focus to the interagency partners as well.

After the NSPD for PR is signed, many people will need various levels of training quickly and no other organization is suited to complete or conduct this task.

Making the PRETC into a PRCOE is one step that could help increase the number of personnel trained for personnel recovery operations. This PRCOE can serve as a one-stop center educating and training DOD, interagency and contractors in PR missions, C2 and even the basic Level B SERE training. Since Level A does not provide the need training in today's battlespace, "CENTCOM [had] provided Level B training to 5,000 soldiers in theater." (Joglekar, 2004, V-9) COCOMs and JFCs do not need this added friction and systemic problem of training in preparation for combat operations. The development of a PRCOE will help remedy and address these shortfalls in training.

Expanding and changing the PRETC into this PRCOE is not without costs. Training more personnel, from the services, governmental agencies, and departments as well as the contractors is a daunting task at best and could be financially daunting. By spreading the burden across the DOD and the various interagency partners, costs can be equalized. Expanding the PRETC's role into training certain I/A personnel and contractors is the right mission, at the right place and at the right time.

CONCLUSION

Personnel recovery is a mission that will always receive national and sometimes even global visibility and attention. Once unknown names including Chief Warrant Officer Michael Durant, Captain Scott O'Grady and PFC Jessica Lynch quickly became synonymous with personnel recovery. Conversely, places like the Son Tay Prison or Desert One and many other locations of unsuccessful rescue attempts and missions also have their place in the nation's history, as well as the history of personnel recovery.

Today, this mission of personnel recovery is one of ever-increasing importance. Personnel recovery is important to service personnel, but also important to the thousands of other U.S. government personnel and even contractors that support military operations in a growing battlespace. This mission must transform and evolve in a number ways across the DOTMLPF landscape.

Doctrine must consist of a capstone document for personnel recovery and with appropriate supporting publications. Additionally, service doctrines must be developed to support a joint PR effort and be made available for DOD and I/A personnel to use and plan from in combat.

Organizations within the personnel recovery community must seek to become a cohesive and integrated team with one purpose: that of returning the IP to friendly control. The Personnel Recovery Advisory Group should be reorganized into four key areas of education/training, policy, technology, and interagency coordination. This PRAG, via a board of directors, should help guide the mission for the DOD and the Interagency partners. Other necessary organizational changes such as incorporating PR manning in the SJFHQ and operational linkages between the JSRC and the JIACG will help the JFC execute the five tasks of PR (report, locate, support, recover and reintegrate) more effectively in combat. Each of these organizations must examine the five tasks in-depth and ensure that their contributions are optimized to return every isolated person.

Doctrine and organizational change mean nothing if personnel are not properly trained to conduct the mission. Each individual must be responsible for assuring they receive their own training, which in turn helps the unit or squadron train to a ready force. These individuals and units shape the capabilities the services/components can provide the JFC during combat

operations. The training of the I/A personnel is just as important as that of DOD personnel and needs to be developed and integrated so the JFC can have a full-spectrum personnel recovery force with properly trained personnel to conduct the mission.

When a person becomes isolated in the battlespace, his/her communications equipment and material technology will either help or hamper the recovery efforts. Today, personnel use many devices to communicate. Selection and implementation of a common device capable of easy integration across the USG is essential. Supporting this is the requirement for appropriate collaborative software for effective C2 of the mission and a PR battlelab that develops and tests this equipment for the warfighter. Our nation must provide the best equipment in the hands of the men and women in the battlespace.

The key to developing change and transformation across the PR mission area is the leadership within the Services, the COCOMs and the Interagency. Educating and preparing the leaders for PR missions and situations is a start, but the leaders must exercise this training and instill a culture of effective PR within their organizations. Instilling the Personnel Recovery Truths across the DOD and the I/A will help to develop informed and educated leaders and other personnel for the mission and increase the level of awareness for personnel recovery.

The ad hoc nature of manning RCCs and JSRCs can be eliminated with coded and identified personnel that can populate PR organizations with those who possess the requisite knowledge, skills and abilities to execute the mission. Inter-service exchanges and codifying standard RCC manning templates are just two simple ways to assure personnel are ready and prepared to conduct the C2 of PR missions. To ensure the necessary training is provided, the facilities supporting personnel recovery must be improved. DOD SERE facilities should be

recapitalized and improved to accommodate increases in training. In addition, changing the PRETC into a PR Center of Excellence for the DOD and the Interagency personnel.

Personnel recovery must be considered a national level mission, requiring the appropriate level of attention and focus. This nation has endured prisoners of war images, pictures and gut wrenching testimony of personnel held in captivity. The time is now to act, to take inventory of the current state of the personnel recovery mission, implement needed DOTMLPF changes and improve the network of forces and personnel that exist to protect the nations most valued resource, its people. This mission matters to the nation, its people and to the personnel who defend it.

BIBLIOGRAPHY

"Aircraft Losses: The loss of aircraft #806." 3 May 2005. <http://www.f-117a.com/Vega31/Vega31-2.html>

Air Force Doctrine Document (AFDD) 2-1.6. *Combat Search and Rescue.* Maxwell AFB, AL. 15 July 2000.

"Air War College Gateway to the Internet." 20 April 2005. <http://www.au.af.mil/au/awc/awcgate/awc-forc.htm#batlab>

"Air Land Sea Application (ALSA) Center." 3 January 2005. <https://wwwmil.alsa.mil/index.html>

Bassani, Joseph. Personal Interview with the author, 11 February 2005.

Benigni, Jessica. "US JFCOM Develops Joint Manpower Exchange Program." US JFCOM Public Affairs, 11 Aug 2004. <http://www.jfcom.mil/newslink/storyarchive/2004/pa081104.htm>

Bracich, Mark E. *CSAR Aide: design requirements for combat search and rescue decision support system for joint rescue coordination centers.* Wright-Patterson AFB: OH: Air Force Institute of Technology School of Engineering, 1989.

_____. Telephone Interview. 8 February 2005.

Burlein, Mike. *Improving Personnel Recovery in a Coalition Environment." IDA Paper P-3705. Alexandria, VA. Institute for Defense Analyses. May 2002.*

Cantrell, Allen F. "What's in the future? Navy Helicopter Combat Support Special Squadrons." *The Officer.* March-April 2003.

Chambers, James. "Approval of thesis excerpt." Email to author. 4 May 2005.

"Combat Survivor Evader Locator." 4 January 2005. <http://gps.losangeles.af.mil/csel/>

"CSEL Initial Operational Lessons Learned." After Action Report. 21 June 2004.

Department of the Air Force; Gulf War Airpower Survey (GWAPS); Government Printing Office, Washington DC, 1993.

Department of Defense, *Conduct of the Persian Gulf War, Final Report to Congress.* Pursuant to Title V of the Persian Gulf Conflict Supplemental Authorization and Personnel Benefits Act of 1991. (Public Law 102-25); Washington DC, April 1992.

Department of Defense Instruction 2310.2. Personnel Recovery. Washington, D.C. Department of Defense, 22 December 2000.

Department of Defense Instruction 2310.4. Repatriation of Prisoners of War, Peacetime Government Detainees and other Missing or Isolated Personnel. Washington, D.C. Department of Defense, 21 November 2000.

Department of Defense Instruction 2310.6. Non-conventional Assisted Recovery (NAR) in the Department of Defense. Washington, D.C. Department of Defense, 13 October 2000.

Department of Defense. Office of Force Transformation. *Military Transformation: A Strategic Approach.* Washington, D.C. Fall 2003.

Department of Defense. Personnel Recovery Update, Defense POW/Missing Personnel Office Newsletter. Washington, Fall 2003. Issue 14.

Dipaolo, Marc. Combat Rescue Operational Review; A summary of Combat Rescue Operations from Vietnam to Kosovo-Final Draft., Pioneer Technologies, Las Vegas, NV, March 2001.

Dunphy, Christopher C. "Combat Search and Rescue: An America Way of War." Quantico, VA: USMC Command and Staff College, 2001.

Ellrich, Douglas K. "Personnel Recovery @ DoS." Email to author: 22 February 2005.

Fortunato, Paul, A. *Tactical Recovery of Aircraft and Personnel: A relevant capability for a moral obligation.* Quantico, VA: USMC Command and Staff College, 2002.

Falzone, Jospeh J. *Combat Search and Rescue: CSEL enhancements for winning Air Campaigns.* Maxwell AFB, AL: Air University Press, 1994.

"General Dynamics C4 Systems." 22 November 2004. <http://www.gdc4s.com/products/index.cfm>

Glines, C.V. "The Son Tay Raid." Air Force Association, *Air Force Magazine*. November, 1995.

Hackworth, David. "Hard lessons learned from Eagle Claw Disaster." The State Journal-Register On-Line. 1 May 2005. <http://www.sj-r.com/sections/opinion/stories.54075.asp>

Hansen, Darren T. *Combat Search and Rescue: Should it be a joint requirement?* Newport, RI: Naval War College, 2001.

Jennings, Jerry D. "PR Conference Opening Remarks." 31 Aug 2004.

"Joint Experimentation Directorate (J9)." 30 April 2005. <http://www.jfcom.mil/about/abt_j9.htm>

"Joint Center for Operational Analysis-Lessons Learned." 3 May 2005. <http://www.jfcom.mil/about/fact_jcll.htm>

Joint Forces Staff College Pub 1. *The Joint Staff Officers Guide.* Washington: National Defense University, Joint Forces Staff College, 2000.

Joint Pub 1. *Joint Armed Warfare of the United States*, Washington: Joint Chiefs of Staff, 2000.

Joint Pub 3-05. *Doctrine for Joint Special Operations,* Washington: Joint Chiefs of Staff, 2003.

Joint Pub 3-50. *Doctrine for Personnel Recovery (DRAFT),* Washington: Joint Chiefs of Staff, 2004.

Joint Pub 3-50.2 *Doctrine for Joint Combat Search and Rescue,* Washington: Joint Chiefs of Staff, 1996.

Joint Pub 3-50.21 *Joint Tactics, Techniques and Procedures (JTTP) for CSAR*, Washington: Joint Chiefs of Staff, 1998.

Joint Pub 3-50.3 *Joint Doctrine for Evasion and Recovery*, Washington, D.C. Joint Chiefs of Staff, 1996.

"*Joint Vision 2020*." 6 December 2004. <www.dtic.mil/jointvision/

"J7 Briefing on The Directorate for Operational Plans and Force Development", Washington, D.C. Joint Chiefs of Staff/J7. 2004,

Joglekar Anil N. *Interagency National Personnel Recovery Architecture: Final Report P-3890.* Alexandria, VA. Institute for Defense Analyses, July 2004.

Kennedy, Harold. "Technology Hurdles hamper Search and Rescue Mission." *National Defense*, May 2001. < http://www.nationaldefensemagazine.org/issues/2001/May/index.htm>

Kriesher, Otto. "Desert One." Air Force Association; *Air Force Magazine*, January 1999. <http://www.afa.org/magazine/jan1999/>

Leahy, Timothy J., "The Future of USAF Combat Search and Rescue. Maxwell AFB, AL: School of Advanced Airpower Studies: Air University. 1998.

_____, "The Heel of American Airpower." Carlisle Barracks, PA: U.S. Army War College, 2004.

Little, Eric. "Briefing: Helo CONOPS."2004.

Malachy, Sandie. "JTF-CSAR – A More Effective Organization for the Joint Forces Commander." Newport, RI: Naval War College, 2004.

Marrett, George J. *Cheating Death: Combat Air Rescues in Vietnam and Laos*. Washington, D.C. Smithsonian Books, 2003.

Meggett, Dave. "Organizing for Search Rescue: Force Structure in a Joint Environment." Maxwell AFB, AL: Airpower Journal, Summer 1995.

Miles, Donna. "DOD developing training to help potential captives." Washington, D.C. American Forces Press Service, 2004.
<http://www.af.mil/news/story_print.asp?storyID+123008182>

"MILNET, Air Force Special Operations Command: A Historical Summary." 15 April 2005.
<http://www.milnet.com/afsoc.htm>

Morgan, George F. "Realigning Joint Doctrine for Effective Theater Combat Search and Rescue (CSAR) Operations." Newport, RI: Naval War College, , 2003.

Money, Arthur. "Opening Statement for Personnel Recovery Conference, Future DOD Technology Requirements." 23 January 2001.
<http://www.dtic.mil/ndia/recovery/moneya.pdf>

National Security Presidential Directive Number 1. 30 April 2005.
<http://www.fas.org/irp/offdocs/nspd/nspd-1.htm>

Nelson, Eric M. "Combat Search and Rescue: Building a Joint Capability to meet the Combatant Commander's Requirement." Carlisle Barracks, PA: U.S. Army War College, 2004.

O'Meara, David. "Doctrine Center." Email to the author: 15 February 2005.

"Operation Allied Force." 3 May 2005
<http://www.defenselink.mil/specials/kosovo/index.html,>

"Operation Enduring Freedom – Order of Battle." 20 February 2005.
<http://www.globalsecurity.org/military/ops/enduring-freedom_orbat-02.htm>

Personnel Recovery Education and Training Center Course (PRETC) Catalog and Training Schedule, Ft Belvoir, VA: Joint Personnel Recovery Agency, 15 December 2004.

Potts, Malcolm. Personal interview with the author. 30 April 2005.

Rees, Elizabeth. "Service training, CONOPS lacking: CSEL rescue radios still ill-suited for ops, Christie tells Senators." *Inside Defense.com*, 1 October 2004,
<http://www.insidedefense.com/secure/defense_search.asp?ACTION=global&REQ=ret&typ=all>

Rees, Elizabeth, "Unless funds increase drastically, CSEL alone won't meet DOD needs." *Inside Defense.com*, 1 October 2004.

http://www.insidedefense.com/secure/defense_docnum.asp?f=defense_2002.ask&docnum=AIRFORCE-15-40-4

Rees, Elizabeth, "U.S. Pacific Command Establishing 24/7 Joint Search and Rescue Center." *Inside Defense.com*, 10 September 2004. <http://www.insidedefense.com/secure/defense_docnum.asp?f=defense_2002.ask&docnum=AIRFORCE-15-37-4>

Ripley, Julie. Department of Defense Personnel Recovery Update Newsletter: Desert Rescue VII, Washington, D.C. January-June 2000, Issue 9. <http://www.dtic.mil/dpmo/personnel_recovery/update09.pdf>

Roosevelt, Ann. "Personnel Recovery goes beyond altruism, general says." *Defense Daily*, September 1, 2004, 2.

"Royal Air Force History."4 May 2005. <(http://www.raf.mod.uk/history.>

Schwartz, Norton, "Opening Remarks at DOD Personnel Recovery Conference" 31 August 2004, Washington, D.C.

Short, Michael. "CSAR." Email to author. 20 February 2005.

Stephens, Hampton. "Asymmetric warfare poses problem for personnel recovery." *Inside the Air Force*, September 3, 2004. <http://www.insidedefense.com/secure/defense_docnum.asp?f=defense_2002.ask&docnum=AIRFORCE-15-36-2>

"Standing Joint Force Headquarters Core Element." 1 May 2005. <http://www.jfcom.mil/about/fact_sjfhq.htm>

The Defense Prisoners of War/Missing Person Office (DPMO) Strategic Plan 2005-2010. 4 May 2005. <http://www.dtic.mil/dpmo/plans/stratplan.pdf>

The Joint Training System, A Primer for Senior Leaders. CJCS Guide 3501. Washington, D.C. Joint Chiefs of Staff, 10 October 2003.

The National Security Strategy of the United States of America. Washington, D.C. The White House, 2002.

Thompson, Billy D. *For Valor or Value, An Examination of Personnel Recovery Operations.* Maxwell AFB, AL: School of Advanced Air and Space Studies, Air University, 2001.

Tilford, Earl. "Seenotdienst: Early Development of Air-Sea Rescue." Air University Review, January-February, 1977.

_____. *The United States Air Force Search and Rescue in Southeast Asia.* Washington, D.C. Center for Air Force History. 1992

Trumpfheller, John. "RE: Info" E-mail to author: 3 May 2005.

Tyner, Lt Col Joe E.; AF Rescue and AFSOF: Overcoming Past Rivalries for Combat Rescue Partnership Tomorrow; US Navy Postgraduate School, Monterey, CA 1996.

"Twenty Fourth Marine Expeditionary Unit." 3 May 2005. <(http://www.usmc.mil/meus/24thmeu.nsf/pages/mission.htm, 2005, 1)>

"United States Air Rescue Service." 1 November 2004. <(http://www.wpafb.af.mil/museum/history/rescue/res4.htm>

"USAF Fact Sheet: Pararescuemen." 31 January 2005. <http://www.af.mil/factsheets/factsheet.asp?fsID=177>

"USAF Fact Sheet Air Force Special Operations Command." 18 January 2005. < http://www.af.mil/factsheets/factsheet.asp?fsID=156>

"USAF Fact Sheet Air Force Rescue Coordination Center." 23 January 2005. <http://www.af.mil/factsheets/factsheet.asp?fsID=193>

U.S. Joint Forces Command. Joint Warfighting Center Doctrine Pamphlet 3. *"Doctrinal Implications of the Standing Joint Force Headquarters (SJFHQ)."* Joint Forces Command, 16 June 2003.

U.S. Joint Forces Command. Joint Warfighting Center Doctrine Pamphlet 5. *"Operational Implications of the Collaborative Information Environment (CIE)."* Joint Forces Command, 1 June 2004.

U.S. Joint Forces Command. Joint Warfighting Center Doctrine Pamphlet 6. *"Doctrinal Implications of the Joint Interagency Coordination Group (JIACG)."* Joint Forces Command, 27 June 2004.

U.S. Marine Corps, *Assault Support, MCWP 3-24* Washington D.C., 2 August 1999

United States Special Operations Command 2003-2004 Posture Statement, United States Special Operations Command, Tampa, FL, 2004

Westermann, Edward B. *Air Rescue Service, A Direction for the Twenty-First Century.* Maxwell, AFB AL: Airpower Journal, Fall 1990.

Whitcomb, Darrell. "Searching for Ebro 33." *Air Power History*, Fall 2002. 34-39.

_____. "Combat Search and Rescue: A Longer Look." Maxwell AFB, AL: *Aerospace Power Journal*, Summer, 2000. 28-36.

Woodward, Bob. *Bush at War*. Washington, D.C. Simon and Schuster, 2002.

Vego, Milan. "Joint Operational Art." Briefing to Joint Advanced Warfighting School, 2005.

Zahart, John W. Strategic Implications of the Department of Defense Personnel Recovery System. Carlisle Barracks, PA. U.S. Army War College, 1996.

Zimmerman, Douglass K. "Understanding the Standing Joint Force Headquarters." *Military Review*, July-August 2004.

Zinni, Anthony. "Approval of thesis material" Email to author: 3 May 2005.